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ABSTRACT

A formative research study was undertaken to describe changes in academic, social, emotional, and behavioral functioning of 14 participants in the grade 3 pilot gifted class during 1983-84. Data were collected from the following eight sources: standardized academic tests, teacher questionnaires, parent questionnaires, student interviews, observation of student behavior, affective testing, grade 4 teacher questionnaire, and a survey of elementary gifted programs in Ontario. Findings included superior academic functioning of participants compared to peers, negative change in teachers' ratings about students' cognitive functioning, a general improvement in many emotional behaviors, gains for all students in reading, and decreased parental satisfaction with transportation arrangements and extracurricular activities. Appended materials include a draft of the pilot program objectives and responses of parents, teachers, and students to Project questionnaires. (CL)

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RESEARCH REPORT

issued by the Research Centre

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PILOT GRADE THREE GIFTED PROGRAM: RESEARCH PROJECT
(SPRING, 1983, TO JUNE, 1984)

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March, 1985

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I. INTRODUCTION

At Board Meeting #5, on April 20, 1983, the members of the Board of Education for the City of Scarborough approved the following recommendation regarding the pilot Grade 3 gifted class:

> "THAT a research project be initiated which would include a longitudinal study of the pupils placed in this program. This project to commence in the Spring of 1983 and conclude in June of 1984 with a report to come to the Education Committee by December 31, 1984."

The following report is a documentation of the procedures used and of the findings which emerged from the research.

Brief History of the Program

A gifted class for primary students (at the Grade 3 level) was inaugurated by the Scarborough Board of Education at Churchill Heights Junior Public School in September, 1981. Scarborough had already initiated a full spectrum of programs for gifted students at the elementary level (Grades 4 to 8) by January, 1976, and at the secondary level (Grades 9 to 12) by September, 1978. The decision to extend the program further beyond these limits to include a self-contained class at the Grade 3 level was taken cautiously. Some of the concerns about and recommendations for the establishment of such a class are documented in a report to the Education Committee by the gifted committee on December 8, 1980 (see Appendix A). The program was started as a "pilot" and, as stated in the recommendations, was to "receive on-going evaluation by the principal, area superintendent, Student and Community Services, and Program Departments."

The first of these evaluations was presented by the Grade 3 gifted committee to the Education Committee at Meeting #3 on February 21, 1983 (Pilot Grade 3 Gifted Program: Interim Progress Report, December, 1982). The results of this evaluation, based on the 1981-82 school year, demonstrated widespread support for the program in all areas investigated. However, as stated in the conclusions, the report was based largely on opinions and comments, and, where tests of measurement were employed, their validity was questioned. To demonstrate the caution with which these conclusions should be treated, attention is drawn to the finding which stated that, "The operation of the pilot Grade 3 class appears to reflect and work toward the accomplishment of the specific program objectives to a very great extent. This seems clearly indicated by observers' comments and student and parent perceptions." (p. 47). However, a review of the objectives of the program (see Appendix B) and the data reported in this interim progress report readily demonstrates that: (a) many of the objectives had not been assessed and (b), where assessment had occurred, measurement of change had been based entirely on informal evidence.

Subsequent to the evaluation described above, no major changes occurred either in the administration of the program or in the general principles upon which the class operated in the following year. At the time the Research Centre was requested to conduct the current study (May, 1983), the Grade 3 class for qualifying gifted students had been operating for almost two years; and even prior to completion of this study in June, 1984, authorization had been granted for continuation of the class for an additional year (to June, 1985).

The Present Study

In keeping with the spirit of the Board's recommendation for continuous evaluation of the Grade 3 gifted class, a new study was requested to cover the period from Spring, 1983, to June, 1984. The results of this study were to help Board members make an informed decision about the future and nature of the primary program for gifted students.

The only specific direction given for the conduct of the research was that it include a longitudinal study of the students placed in the program. Clarification of this task, by a steering committee, revealed that "longitudinal" was not to be understood necessarily in the traditional manner of following the students' progress on a long-term basis. It was interpreted by members of the committee to mean that the current study would involve a more thorough evaluation of student performance in the special class setting and that perhaps some further long-term monitoring would be planned for the future. Special mention was made in the steering committee of the criteria for admission to this program. In addition to the usual criteria for acceptance into the gifted program, ". . . the candidate [was required to] have a demonstrated need which cannot be met in a regular school setting." (see Appendix A, admission criteria).

After much consideration, it was decided that the most valid and practical information which could be provided within the timelines would result from a formative[1] research study. Attempts would be made to provide as much data as possible about the students selected for this program, including data obtained from before their admission and data collected during their participation in the gifted class. It was agreed, therefore, that the focus of the present study should be to describe the changes in academic, social, emotional, and behavioural functioning of the students who participated in the pilot Grade 3 gifted class during the 1983-84 school year.

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[1] "Formative evaluation" is a form of preliminary assessment which provides information for immediate decision making and direction for subsequent changes.

Some Issues in Gifted Education and Research Related to It

Many educators have taken exception to the second class status to which gifted education has been assigned (Gallagher, 1982; Tuttle, 1983). They suggest that two attitudes which have permeated educational and social circles may be responsible for this situation: (a) that provision of special educational opportunities for gifted students is elitist and interferes with the democratic and egalitarian principles of North American society, and (b) that bright students will succeed under any circumstances and that elaborate programming for them is unnecessary. Suffice is to say that these attitudes have affected the development, funding, and quality of programs.

Gallagher chronicles the "ups" and "downs" of gifted education in the United States as related to the political demands of the times. Perhaps because of the more neutral role assumed by Canadians in the global context, external influences have been less evident. As such, the development of programs for the gifted, although not without a considerable number of deliberations and negotiations, has progressed in a more linear fashion. The situation in Ontario today represents a new era where the decision regarding provision of educational opportunities for gifted students is no longer a debatable issue. The Education Act, Chapter 129, Section 147 (7) (Ministry of Education, 1983), known formerly as Bill 82, has made provision of appropriate programs for the intellectually gifted a legislated responsibility of school boards. The assumption is that this would lead to greater personal benefits to students and ultimately to improvement for society in general. The past pursuit of attaining equality in education has been replaced by the current password of "pursuit of excellence". Although this may be seen as a boon to the education of gifted students, it does not provide ready answers about "how to do it". Also not included are directions on how to ensure quality control. For such information, one should be able to turn to research documents to determine the state of the art.

Unfortunately, much of the research currently available about gifted programs has been under fire recently for having been poorly designed or executed (Callahan, Covert, Aylesworth, and Vanco, 1981; Kolloff and Feldhusen, 1984; and Treffinger, 1984). The criticisms include: lack of control groups in the design of studies, reliance on attitudinal data, use of inappropriate tests, inadequate treatment of statistical data, lack of objectivity in reporting, problems of definition, and lack of curriculum evaluation. Perhaps now, with official sanction, more attention will be paid to upgrading the education of gifted students. This, in turn, should be accompanied by increased demands for controlled and valid research. In the following section, a review of some of the more reliable studies which are relevant to the current project will be presented.

Review of the Literature

Although most of the classic and original studies on gifted individuals (such as Terman and Oden, 1947) focussed on school-age children over the age of nine, it is apparent that gifted children at a much younger age can, and are, being identified. Parents and educators are becoming aware of internal needs and external pressures to identify these students early. However, because of the relative newness of such concerns, the research available on primary school age students (six to nine years) is limited mainly to theoretical and descriptive papers, and a few program evaluation studies. Therefore, decision-making information has often been extrapolated from studies of older children.

A case in point is a longitudinal study conducted by Humes and Campbell (1980) over a 15-year period. Young adults who began their special educational placement at the Grade 4 level reported that the gifted program in which they participated had a positive impact on their lives and attitudes. However, answers to two seminal questions, (a) how early should programs for gifted students begin and (b) what types of program are most effective, are lacking.

In making a case for the provision of special programming for young gifted students, Ciha, Harris, and Hoffman (1974) claim that parents can identify their gifted children accurately at the kindergarten level. Likewise, teachers today are better trained at identifying exceptional children, and more specialists and resource support services have made earlier identification possible. With this has come a realization that intervention of some type may be necessary for some children if the following progression of emotional and behavioural problems is to be avoided: boredom, loneliness, withdrawal, and depression--possibly resulting in dropping out of school, delinquency, and/or suicide. Whitmore (1980) and Karnes (1983) have written extensively about the underlying stresses affecting gifted children, and both argue vociferously for specialized programming for these children as early as possible.

Some of the first attempts to provide programs for young gifted students consisted of "early entry" into school or of "acceleration" either by skipping a grade or by compressing three grades into two. However, Stennett (1969), in an excellent critical review of studies on early admission to kindergarten, concludes that the gains are minimal and the disadvantages considerable. McCumsey (1983), in her arguments against accelerated programs, states that these are merely short-term remedies, because gifted children will always learn at an accelerated pace and, therefore, soon exceed their new placements.

Other attempts at programming for gifted students come under the broad category of "differential programs"; they include such provisions as withdrawal, partial withdrawal, and enrichment programs, as well as special resource rooms. In general, many of the studies of these programs are the ones which suffer from the lack of scientific credibility described earlier. Nevertheless, many of them make positive claims about their results. A contrary position was taken in a Task Force report on Educating Gifted and Talented Pupils in Alberta (Alberta Board of Education, 1983), in which it was suggested that any provision which requires a child to participate in two programs is unfair and unrealistic.

A number of papers and documents have drawn attention to the psycho-social components of giftedness (Sapon-Shevin, 1984; Miller, 1978). A follow-up study conducted by the Etobicoke Board of Education on advancement classes for the gifted reported that initial feelings of insecurity which were experienced by students in Grade 4 dissipated by Grade 6 (Woodliffe and Somwaru, 1968). In one of the few studies involving students between their kindergarten and fourth grade year at school, Wurster and Ball (1976) reported that, although significant academic improvement was achieved, similar gains were not evident for social and emotional factors. Tuttle (1983), however, raises the question that, if specially trained teachers of the gifted are unable to help satisfy the needs of these students, how can we expect a regular classroom teacher with a diverse student population to be able to cope adequately. It is this last argument, then, which brings us full circle, probably reflecting the lack of clarity and direction available at the moment with regard to the successful education of the primary gifted student. This area of programming and research is still very much in its infancy and will require considerable attention before the benefits are reaped.

Definition of Giftedness

The Scarborough Board of Education defines giftedness in the same way as does the Ontario Ministry of Education as:

> An unusually advanced degree of general intellectual ability that requires differentiated learning experiences of a depth and breadth beyond those normally provided in the regular school program to satisfy the level of educational potential indicated.[1]

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[1] Special Education Information Handbook, p.17.

II. METHODOLOGY

Selection of Students

All 14 of the students who were accepted into the Grade 3 gifted program at Churchill Heights Junior Public School by September, 1983, participated in the study (two students who joined the class later were not included). The students had all been referred to, and formally accepted through, Scarborough's Identification, Placement, and Review Committee (IPRC) for this special class placement, the criteria for which are specified in Appendix A. The class was comprised of five girls and nine boys ranging in age from seven years, six months to eight years, nine months as of September, 1983. The home schools from which these students came (and the number of students from each) were: Timberbank Jr. (3), Burrows Hall Jr. (1), Danforth Gardens (1), West Rouge Jr. (3), Tam O'Shanter Jr. (1), Eastview Jr. (1), North Agincourt Jr. (1), North Bendale Jr. (1), Centennial Road Jr. (1), and Guildwood Jr. (1). All students had been enrolled in regular Grade 2 classes. Written parental permission (see Appendix C) was obtained for each student's involvement in the experimental testing procedures. These yielded data through standardized academic tests, interviews, observations, and assessments of social, emotional, and personality change.

Much thought was given to procuring a control group of students for comparative purposes. This would have necessitated matching students on several independent variables (e.g., age, I.Q., etc.). Due to the very specific nature of the group identified, this was considered to be an insurmountable task for a number of reasons. One, based on statistics related to the normal distribution, it was clear that only about one-half of one per cent of the population would be above the 140 I.Q. level required to qualify as "gifted" for the Scarborough program. (Note that, as in the elementary and secondary criteria for placement of gifted students, the I.Q. score of 140+ may be obtained in either the verbal or performance areas, or both). This placed severe limitations on the pool from which to draw potential subjects for both an experimental and a control group. Obtaining sufficient numbers would be further restricted by the following: the rigorous criteria (in addition to satisfying I.Q. requirements) for acceptance into the class, the prior knowledge that not all parents of gifted children support segregated programming (particularly for the very young), the logistical problem of the class being a great geographical distance away from home for many students (resulting in some parents rejecting the program), and the reasonably limited number of IPRC referrals from which to choose. Two, not all students referred for the program had received their review, and therefore placement, by the end of the school year in June, 1983. As will be discussed in the following section, this meant that some of the data had to be obtained retroactively--a less than desirable situation at any time, and one which would have been very difficult administratively, particularly on a scale twice as large. The third reason, and one which always requires serious consideration, had to do with ethics; it would be very difficult to justify withholding a beneficial program from students identified as having special needs (i.e., those placed in a control group).

Data Collecting Materials and Administration Times

Data were collected from the following eight sources (a summary of which is provided in Table 1).

TABLE 1

DATA COLLECTION SUMMARY CHART

Group	Variable(s) Measured	Assessment Technique	Assessment Time(s)	Administrator
Students	Reading Comprehension	Sequential Tests of Educational Progress (STEP) (Reading Subtest)	September, 1983, and June, 1984	Classroom teacher
	Mathematics Computation and Application	Canadian Achievement Tests (Mathematics Subtests)	September, 1983, and June, 1984	Classroom teacher
	Student Characteristics (social, emotional, approach to learning, etc.) and satisfaction with school program	Structured interview	June, 1983, and June, 1984	Trained interviewers
	Classroom Behaviours	Classroom observation	June, 1983, September, 1983, and June, 1984	Trained observers
	Affective Behaviours	Rorschach Personality Test	June, 1983, and June, 1984	Psychologist
Parents	Student Characteristics (cognitive, social, emotional, etc.) and satisfaction with various aspects of the school program	Questionnaire (mailed)	June, 1983, and June, 1984	Self
Teachers: 1) Grade 2, Grade 3	Student Characteristics (cognitive, social, emotional, etc.)	Questionnaire	Grade 2 teachers--June, 1983; Grade 3 teachers--June, 1984	Self
2) Grade 4	Differences between students accepted into gifted program at Grade 3 and at Grade 4	Questionnaire	May, 1984	Self
Board Administrators of Special Education Services (Ontario)	Number and types of programs provided for gifted elementary students	Questionnaire (mailed)	May, 1984	Self

1) *Standardized academic tests:* The **Sequential Test of Educational Progress (STEP), Reading Subtest (1979),** was administered in September, 1983 (Form F, Level X), and June, 1984 (Form G, Level Y). This test was chosen, in consultation with a staff member of the Scarborough Board of Education's Reading Centre, for the following reasons: (a) The test was designed to measure a wide variety of reading skills, including vocabulary, literal comprehension, and inferential abilities. The stimulus materials contain an interesting mixture of academic and non-academic items which provide a special appeal for the test taker. Included are passages of drama, poetry, social studies, science, newspaper articles, advertisements, letters, and sets of instructions. (b) The test norms were designed so that there is no problem of students' scores suffering from the "ceiling effect". Gifted students tend to reach the "ceiling" (i.e., the upper end of the scoring scale) on many traditional graded tests. Therefore, in order to prevent what could be interpreted as a failure to improve scores from the beginning to the end of a school year, or even in lowering scores (because of the regression effect), there must be the potential in a test for the students to be able to show "growth". The STEP Reading Test has this inherent feature which is referred to as out-of-level testing. (c) The test was ready-made for group administration. (d) The testing materials were thought to be well and clearly presented. This was important because these students were being tested on materials generally used with older students.

Other tests included the **Canadian Achievement Tests (CAT) for Mathematics Computation** (C) **and Mathematics Application** (A), **1981.** Both tests were administered in September, 1983 [Test 8 of Level 13 (C) and Test 6 of

Level 14 (A)], and again in June, 1984 [Test 9 of Level 13 (C) and Test 7 of Level 14 (A)]. As with the reading test, these tests were chosen in consultation, in this case, with the mathematics co-ordinator, Program Department, Scarborough Board of Education. The tests were selected for the following reasons: (a) They provided two distinct scores for mathematics skills: computation, reflective of mechanical arithmetic skills, and application, with an emphasis on problem solving or abstract thought processes. As with the STEP Reading Test, the CAT individualized norms were designed to allow for a measurement of growth from the beginning to the end of the school year because scale scores are not tied to expected grade level performance. (b) The tests were ready-made for group administration. (c) The testing materials were well and clearly presented. (d) The test was Canadian-made and, therefore, did not suffer from any non-Canadian bias.

2) *Teacher questionnaire:* A questionnaire was designed to help teachers evaluate students' application of cognitive skills, approach to learning, social skills, and emotional adjustment (see Appendix D). This questionnaire was constructed (with some modifications) from Barbara Clark's rating scales (Clark, 1979, pp. 429 - 441). The reasons for selecting this assessment tool were that the instrument was perceived as valid and complete and it was readily accessible. Also, the lack of time provided to initiate the study precluded a widespread search of testing materials, or any hope of having an order for a commercially-produced questionnaire filled within the time available, or the development of any completely original materials.

The questionnaire, which consisted of 33 items describing characteristics of student behaviour, required teachers to rate their responses for each student on a scale of one to five. Also included were open-ended questions related to potential benefits of the program and appropriateness of placement for students. One copy of the questionnaire was to be completed by each student's Grade 2 teacher, at the end of the Grade 2 school year (June, 1983); a second copy for each student was to be completed by the Grade 3 gifted class teacher upon completion of that school year (June, 1984). In fact, because a number of the students (6) were not officially accepted into the program until August or September, 1983, the Grade 2 teachers of these six students were required to rely on memory when responding to the questionnaire.

3) *Parent questionnaire:* A questionnaire for parents (see Appendix E), which again was modelled after Clark's survey, was designed to complement the teacher questionnaire. The twenty-five items describing students' characteristics were identical to those on the teacher questionnaire; some items (8) were omitted because it was assumed that parents could not comment validly about certain aspects of classroom behaviour. Also included were open-ended questions related to parental satisfaction or dissatisfaction with various aspects of their child's school program. Some of these extra questions, including those dealing with topics such as extra-curricular activities and transportation, were the same as those asked of the students (as described below) for comparative purposes.

These questionnaires were mailed out to parents for completion at the end of the Grade 2 school year (or as soon as the student had received official acceptance into the program) and then again at the end of Grade 3.

4) *Student interview:* Student perceptions about their class placements were obtained by individual interviews. These were conducted at the end of the regular Grade 2 year (or as soon as possible thereafter) and at the conclusion of the Grade 3 gifted program. The interviews were structured in format through 19 pre-determined questions developed by members of the steering committee (see Appendix F). Information was sought about students' satisfaction or dissatisfaction with various aspects of their school program (e.g., quality of, and opportunities for, social interaction; academic stimulation and challenge; extra-curricular activities; and transportation).

The questionnaire was pilot tested to ensure item clarity and to establish the inter-rater reliability of interviewers. All but three items were rated on a five-point scale, and responses were coded immediately on the questionnaire form. Of the other items, two were open-ended questions for which shorthand responses were recorded. One question on the final questionnaire requested the students to share with the interviewer "what they might like to do when they grow up"--a question for which answers might comprise an interesting comparison in a follow-up study in future years, but not to be reported in the current study.

5) *Observation of student behaviour:* As a measure of individual students' classroom behaviour, it was decided to focus on behaviour that was considered "off-task". In the case of gifted children, this included, for instance, time spent helping other students, because it has been suggested that to permit such behaviours for these students is simply an easy way for teachers to keep them busy and out of trouble, even though it might be rationalized that they learn

to help those who are less able than themselves. With these ideas in mind, a list of possible "off-task" behaviours was enumerated and categorized. These included a variety of factors such as different forms of wasting time, bothering behaviour, behavioural forms of withdrawal, and doing work other than that assigned. A rapid review (necessitated by lack of time) of existing check lists revealed that there was very little available that was entirely appropriate.

The observational chart which was developed was pilot tested and modified; a second set of modifications was also made after the Grade 2 observations. These second modifications were related only to record keeping; it was felt that validity was not jeopardized and that the ease and improved quality of recording justified this latter set of changes (see Appendix G for the final version of the observational chart).

6) *Affective testing:* Since it was viewed as an integral aspect of this study, much consideration was given by steering committee members to assessment techniques related to emotional adjustment. With input from the chief psychologist of the Scarborough Board of Education's Psychology Department, the Rorschach Ink Blot Test--a personality, "problem-solving" test--was chosen as the aid to measurement in this area. This tool was seen as particularly useful because it yields a wide variety of information, and children cannot divine what responses may be "expected". The following attributes were chosen for assessment: approach to tasks, ability to tolerate stress, flexibility of thought, willingness to display emotions openly, ease with which emotional situations are handled, self-acceptance, willingness to handle complex stimulii, inclination to set realistic goals, reality testing,

interest in other people, the inner resources one has to call upon in problem situations, and problem solving style.

7) *Grade 4 teacher questionnaire:* The opinions of Grade 4 teachers of the gifted program at Churchill Heights Junior Public School were also solicited. Their opinions were sought in an effort to determine whether differences were noted in academic, social, behavioural, or work habits of students who had participated in the pilot Grade 3 gifted class compared to those students who gained entrance into the gifted program directly at the Grade 4 level. The short 5-item questionnaire (see Appendix H) was distributed to the four Grade 4 teachers in May, 1984. It was hoped that this timing would eliminate early "spurious" adjustment problems in the Grade 4 students and, therefore, that responses would reflect whether any valid long-term benefits remained for students who had participated in the Grade 3 gifted program. (It should be noted that the Grade 4 teacher responses would be related to the students of the 1982-83 pilot program).

8) *Survey of elementary gifted programs in Ontario:* As a means of obtaining a numerical and descriptive account of programs available to elementary gifted children in Ontario, a survey of various boards of education was conducted. A brief questionnaire was designed and distributed to the Special Education contact person in boards deemed large enough to provide an acknowledged program for gifted students (see Appendix I).

Data Collecting Procedures

The following eight sections relate to those described in the previous section.

1) All standardized tests (reading and mathematics) were administered by the classroom teacher, during class time and in the regular classroom. Testing materials and procedures were prepared by the researchers (see Appendix J) and were reviewed with the teacher to ensure that controlled and objective conditions were established. The tests were scored manually by research personnel.
2) Each student's Grade 2 teacher was contacted and requested to respond to the teacher questionnaire. Since the Grade 3 teacher had to provide data for all students (13), arrangements were made with the principal to allow time for completion of the teacher questionnaire by providing some classroom coverage. Questionnaires were returned to the Research Centre via Board courier.
3) Parent questionnaires were mailed and were accompanied with stamped, addressed envelopes for return to the Research Centre. Follow-up phone calls were made when questionnaires were not returned.
4) Individual students were withdrawn from the class for the interviews. The interviewers arranged mutually convenient times with the classroom teachers; on average, each interview was 15 minutes in duration. All interviews were conducted by two individuals previously trained by Scarborough Research Centre staff in a variety of testing techniques, including observation, rating, and coding.
5) As with the interviews, a schedule for student observations was arranged to suit both teachers and observers. The observers were the same two individuals described in the section above. Only morning instructional or work periods were included in the observation sessions. A total of one hour of observation per student was made during each of the three

assessment times (June, 1983,[1] September, 1983, and June, 1984). Due to original time constraints, and a later desire to improve the observational recording technique, some modifications were made in the procedures from one assessment time to the next. During the first observations (Grade 2) in June, 1983, which required travelling to many different schools, each observer was assigned to a specified student for an entire hour (four students per observer). For the second observations, with all students in the same Grade 3 class, both observers watched each student for a half-hour period (total observation time per student--one hour). The final observation also consisted of one hour of total observation time per student, but a different system was employed. Each observer observed each student for two different half-hour sessions, with a "five minute on, five minute off" system of observing/recording. The purpose was to provide a wider observational time frame and time for more complete and accurate recording during the "off" periods.

6) The Rorschach Test was administered in June, 1983, by the psychologist who had selected each student, and again in June, 1984, by the chief psychologist from the Scarborough Board of Education's Psychology Department. Only those nine students who were enrolled for the pre-test were involved. Students were withdrawn individually to a quiet area for the testing sessions. Scoring of both sets of results was done by the chief psychologist at the end of the study in an attempt to reduce potential scoring bias.

7) The questionnaires for Grade 4 teachers of the gifted program were

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[1] Only eight students were registered and, therefore, observed at this time.

distributed and accompanied by envelopes for return to the Research Centre via Board courier.

8) A list of Ontario boards of education and the names of the contact persons in Special Education Services was provided by the Ministry of Education. Questionnaires were mailed to the contact persons, with stamped, addressed envelopes for return.

Analysis of Data

The data obtained from the first four data-collecting techniques described above were analyzed by use of the Statistical Analysis Package for the Scarborough Board of Education (Mangan, 1979). The output included means and frequencies. The distributions of means for Grade 2 and Grade 3 teacher data were converted manually to standard score distributions to allow for direct comparison. A newly acquired statistical package, SPSS/PC for the IBM Personal Computer /XT (Norusis, 1984), was used to calculate statistical significance for differences between parents' Grade 2 and Grade 3 ratings (t-tests for paired samples).

Data from individual student observation records were totalled manually. Means were calculated for each of the three observation times and then data were rank-ordered.

The ratios for each attribute measured by the Rorschach Test were calculated by a Rorschach computer program.

Responses to the three questionnaires returned by the Grade 4 teachers in the gifted program, as well as comments to open-ended questions, were summarized manually.

Data from the survey of gifted programs in Ontario were also summarized manually.

III. RESULTS

Return of Data

Almost complete sets of data were collected for each area investigated in this study. This was due largely to two factors: (a) the small size of the group (14 students in total enrolled at the outset of the program), which facilitated follow-up when necessary; (b) the special nature of the program which, it can be hypothesized, promoted a high degree of commitment amongst participants and, therefore, engendered a sense of co-operation.

Of the initial 14 students, 13 completed their year in the Grade 3 gifted program. The one student who left the class moved out of Scarborough with family. Data return rates for testing procedures are reported in Table 2.

Academic Achievement

The results of standardized academic testing are reported in Figure 1. As demonstrated by the bar graphs, these students performed at a level much higher than would be expected for their chronological grade (3.0) upon entering the program. This was evident particularly in reading where the average grade level for the class was 5.8 (almost three grade levels above the norm). Scores for mathematics were somewhat lower than were those for reading, but still higher than expected grade level; students' mean grade level for mathematics computation was 3.8 and, for mathematics application, 4.9 at the outset of the program.

Post-program results showed that students gained an average of more than one grade level in each of the three achievement areas measured. Specifically, reading scores rose to a 7.1 grade level, mathematics computation to a 4.9 level, and mathematics application to a 6.3 level.

TABLE 2

DATA RETURN RATES

Test/Questionnaire	Total Possible	Number and Per Cent Returned	Comments
STEP Reading (Grade 2)	14	13 (93%)	One late admission to program.
STEP Reading (Grade 3)	13	13 (100%)	One student moved and, therefore, is not included in any post-testing.
CAT Mathematics Computation (Grade 2)	14	14 (100%)	
CAT Mathematics Computation (Grade 3)	13	13 (100%)	
CAT Mathematics Application (Grade 2)	14	14 (100%)	
CAT Mathematics Application (Grade 3)	13	12 (92%)	One student discounted due to probable accidental omission of some questions.
Student Questionnaire (Grade 2)	14	14 (100%)	
Student Questionnaire (Grade 3)	13	13 (100%)	
Teacher Questionnaire (Grade 2)	14	13 (93%)	One out-of-province admission.
Teacher Questionnaire (Grade 3)	13	13 (100%)	
Parent Questionnaire (Grade 2)	14	12 (86%)	Follow-ups ineffective.
Parent Questionnaire (Grade 3)	13	11 (85%)	Follow-ups ineffective.
Rorschach Personality Test (Grade 2)	9	9 (100%)	Only those enrolled by the end of June, 1983, were involved.
Rorschach Personality Test (Grade 3)	9	9 (100%)	
Grade 4 Teacher Questionnaire	4	3 (75%)	Not related to the number of students in the current study.
Survey of Elementary Gifted Programs in Ontario	43	39 (91%)	

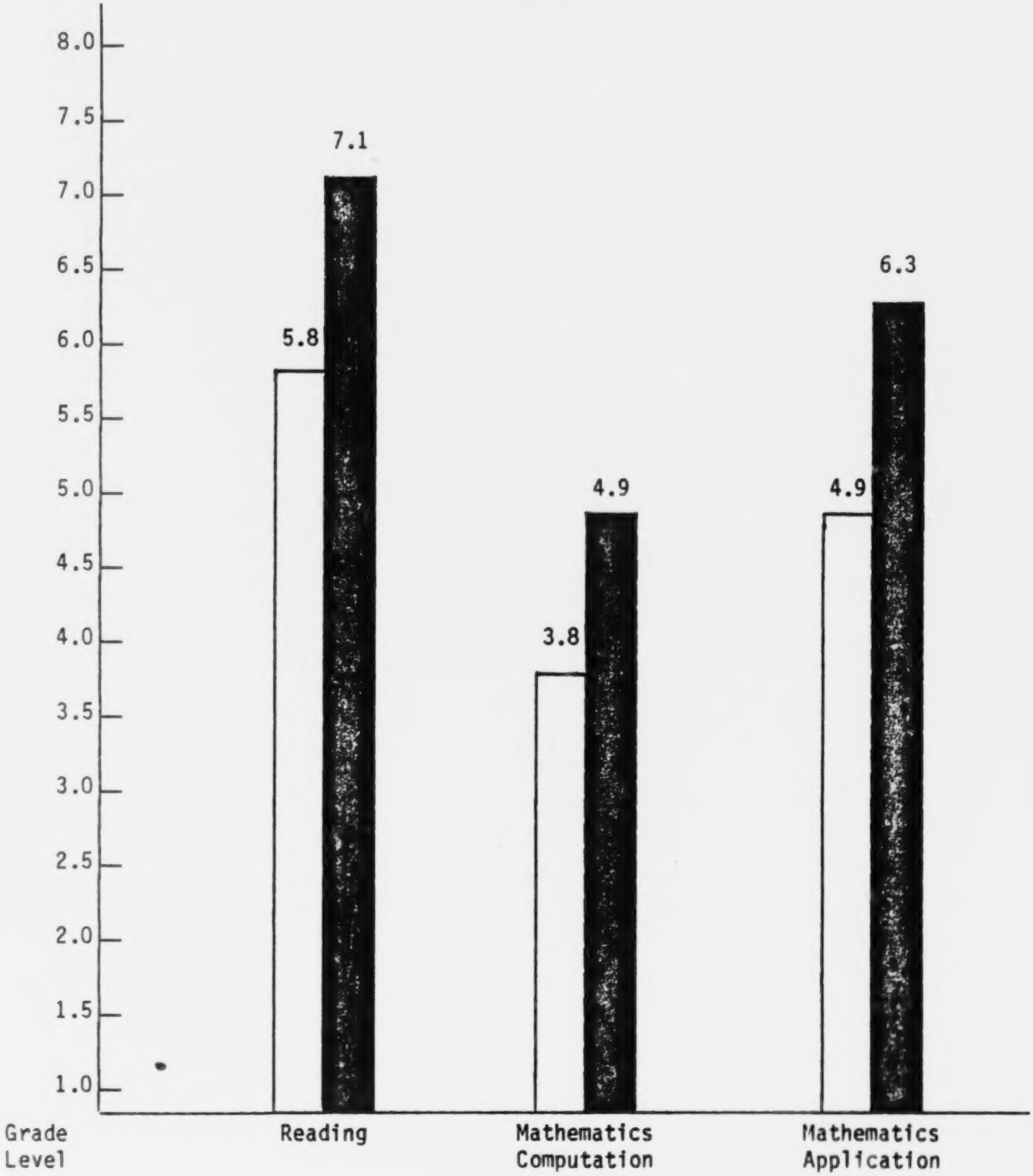

Figure 1. A comparison of Grade 2 (June, 1983) and Grade 3 (June, 1984) mean grade scores on academic achievement tests. (Grade 2, 14 students □ ; Grade 3, 13 students ■ .)

On an individual basis, all students showed progress in reading from the beginning to the end of the program. In mathematics, gains were made by all students except three (one in computation, two in application). Individual profiles can be found in Appendix K. These had been created in an attempt to determine whether some students were better suited than others for this special class placement.

Teachers' Perceptions of Changes in Student Characteristics from Grade 2 to Grade 3

In general, the Grade 2 teachers who rated these students prior to their enrolment in the gifted program did so quite positively (see Table 3). Most of the highest ratings were for characteristics related to cognitive behaviour and school adjustment. These included perceptiveness (4.7), general knowledge and skills (4.6), enjoyment of school (4.5), responsiveness and motivation (4.5), sensitivity and response to problems (4.5), persistence in own interests (4.4), intellectual curiosity (4.4), and reasoning (4.4). Two other characteristics rated highly (at 4.4) were openness to experience and enthusiasm, both within the category of emotional behaviour. Amongst the lowest ratings were aggressiveness with intent to hurt (1.5), anxiety over achievement (2.8), status/leadership in class (3.0), and influence of peers (3.0). Several other variables, related to social behaviour, also received relatively low ratings; these included popularity with peers (3.5), social maturity (3.6), popularity with adults (3.7), and acceptance of others (3.7). One other variable with a relatively low rating, independence in work (3.5), was within the cognitive behaviour and school adjustment category of characteristics.

TABLE 3

GRADE 2 TEACHERS' PERCEPTIONS OF STUDENT CHARACTERISTICS IN JUNE, 1983 (N=14)

Item Number	Student Characteristic[b]	Number of Responses[a]						Mean
		1	2	3	4	5	NR	
	Cognitive Skills and School Adjustment							
1.	Knowledge and skills	-	-	1	3	9	1	4.6
2.	Concentration	-	1	4	2	6	1	4.0
3.	Enjoyment of school	-	-	1	4	8	1	4.5
4.	Persistence							
	a) in own interests	-	1	1	3	8	1	4.4
	b) in assigned tasks	-	2	1	4	5	2	4.0
5.	Responsiveness	-	1	-	3	9	1	4.5
6.	Intellectual curiosity	-	1	1	3	8	1	4.4
7.	Pursuit of challenge	-	1	2	3	7	1	4.2
8.	Perceptiveness	-	1	-	1	11	1	4.7
9.	Verbal facility	-	1	1	4	7	1	4.3
10.	Fluency of ideas	-	1	1	5	6	1	4.2
11.	Flexibility	-	2	1	6	4	1	3.9
12.	Sensitivity to problems	-	1	-	4	8	1	4.5
13.	Originality	-	-	3	3	7	1	4.3
14.	Imagination	-	-	4	4	5	1	4.1
15.	Reasoning	-	1	-	5	7	1	4.4
16.	Independence in thought	-	-	5	2	6	1	4.1
17.	Independence in work	1	1	5	2	4	1	3.5
18.	Elaboration	-	1	2	6	4	1	4.0
19.	Aesthetic appreciation	-	1	3	4	4	2	3.9

TABLE 3 (Continued)

Item Number	Student Characteristic[b]	Number of Responses[a]						Mean
		1	2	3	4	5	NR	
	Social Behaviour							
20.	Popularity a) with adults	-	1	5	4	3	1	3.7
	b) with peers	2	-	3	4	3	2	3.5
21.	Acceptance of others	-	2	5	1	5	1	3.7
22.	Status, leadership	2	3	2	5	1	1	3.0
23.	Social maturity	1	-	5	4	3	1	3.6
24.	Sense of humour	-	2	2	4	5	1	3.9
	Emotional Behaviour							
25.	Emotional stability	-	2	2	5	4	1	3.8
26.	Emotional control	-	1	4	2	5	2	3.9
27.	Openness to experience	-	2	-	2	9	1	4.4
28.	Enthusiasm	-	1	1	3	8	1	4.4
29.	Self-acceptance	-	2	1	3	7	1	4.2
	Additional Items							
30.	Conformity							
	a) influence of adults	-	-	3	6	3	2	4.0
	b) influence of peers	1	-	9	2	-	2	3.0
31.	Anxiety over achievement	-	5	4	3	-	2	2.8
32.	Competitiveness	-	1	4	4	3	2	3.8
33.	Aggressiveness (intent to hurt)	8	3	2	-	-	1	1.5

[a] 1 = Very little, 2 = Little, 3 = Moderate, 4 = A lot, 5 = A great deal, NR = No Response

[b] Characteristics are defined on the Teacher Questionnaire, see Appendix D.

The distributions of scores and mean ratings of the Grade 3 teacher for student characteristics are reported in Table 4. These are presented for the information of readers interested in the raw data. However, to allow direct comparison of the results of the 10 teachers who made up the ratings for Grade 2 with the ratings of the one Grade 3 teacher, the distributions of means were first converted to standard score distributions[1] with the same general mean (50) and standard deviation (10) (see Table 5). This was necessary for two reasons: (a) the larger group of Grade 2 teachers provided a natural averaging of ratings which was not possible in the Grade 3 situation, and (b) one might assume that the standards or expectations of the teacher in the Grade 3 gifted class would be different from those of the teachers in the regular Grade 2 classes.

The results of these comparisons (Table 5) demonstrate that the Grade 3 teacher rated characteristics related to cognitive skills and school adjustment (items 1-19) slightly lower than the Grade 2 teachers (average standard score 49.4 versus 53.6 respectively). Although social characteristics (items 20-24) were rated amongst the lowest overall, the Grade 3 teacher ratings were a great deal higher than were those of the Grade 2 teachers (48.5 versus 36.7). Emotional behaviours (items 25-29) were rated only slightly higher by the Grade 3 teacher compared to the Grade 2 teachers (55.2 versus 51.4).

More specifically, with respect to individual characteristics, it is interesting to note that the items which were rated the highest by the Grade 2 teachers were similarly rated by the teacher in Grade 3. These included knowledge and skills (standard score for Grade 2 and Grade 3 respectively,

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[1] A statistical method of equalizing different sets of data; the distributions are transformed so that they have comparable mid-points (averages) and ranges (standard deviations).

TABLE 4

GRADE 3 TEACHER'S PERCEPTIONS OF STUDENT CHARACTERISTICS IN JUNE, 1984 (N=13)

Item Number	Student Characteristic[b]	Number of Responses[a]						Mean
		1	2	3	4	5	NR	
	Cognitive Skills and School Adjustment							
1.	Knowledge and skills	-	-	3	6	4	0	4.1
2.	Concentration	-	6	3	3	1	0	2.9
3.	Enjoyment of school	-	-	-	11	2	0	4.2
4.	Persistence							
	a) in own interests	-	-	1	9	3	0	4.2
	b) in assigned tasks	-	3	7	3	-	0	3.0
5.	Responsiveness	-	1	3	6	3	0	3.8
6.	Intellectual curiosity	-	1	4	5	3	0	3.8
7.	Pursuit of challenge	-	-	8	4	1	0	3.5
8.	Perceptiveness	-	-	2	9	2	0	4.0
9.	Verbal facility	-	1	4	5	3	0	3.8
10.	Fluency of ideas	-	1	7	4	1	0	3.4
11.	Flexibility	-	1	9	2	1	0	3.2
12.	Sensitivity to problems	-	1	5	7	-	0	3.5
13.	Originality	-	1	8	3	1	0	3.3
14.	Imagination	-	1	6	5	1	0	3.5
15.	Reasoning	-	-	7	5	1	0	3.5
16.	Independence in thought	-	1	6	5	1	0	3.5
17.	Independence in work	1	4	6	2	-	0	2.7
18.	Elaboration	-	6	4	2	1	0	2.8
19.	Aesthetic appreciation	-	-	4	9	-	0	3.7

TABLE 4 (Continued)

Item Number	Student Characteristic[b]	Number of Responses[a]						Mean
		1	2	3	4	5	NR	
	Social Behaviour							
20.	Popularity a) with adults	-	-	2	10	1	0	3.9
	b) with peers	-	2	7	3	1	0	3.2
21.	Acceptance of others	-	2	-	10	1	0	3.8
22.	Status, leadership	1	4	4	3	1	0	2.9
23.	Social maturity	-	2	3	6	2	0	3.6
24.	Sense of humour	-	2	2	9	-	0	3.5
	Emotional Behaviour							
25.	Emotional stability	-	-	4	9	-	0	3.7
26.	Emotional control	-	-	4	8	1	0	3.8
27.	Openness to experience	-	-	4	9	-	0	3.7
28.	Enthusiasm	-	-	1	9	3	0	4.2
29.	Self-acceptance	-	-	8	4	1	0	3.5
	Additional Items							
30.	Conformity							
	a) influence of adults	-	-	3	8	2	0	3.9
	b) influence of peers	-	3	2	7	1	0	3.5
31.	Anxiety over achievement	1	4	4	4	-	0	2.8
32.	Competitiveness	1	4	7	-	1	0	2.7
33.	Aggressiveness (intent to hurt)	12	1	-	-	-	0	1.1

[a] 1 = Very little, 2 = Little, 3 = Moderate, 4 = A lot, 5 = A great deal, NR = No Response

[b] Characteristics are defined on the Teacher Questionnaire, see Appendix D.

TABLE 5

COMPARISON OF GRADE 2 AND GRADE 3 TEACHERS' PERCEPTIONS OF STUDENT CHARACTERISTICS BASED ON CONVERSION TO STANDARD SCORES[a] USING SETS OF PAIRED DATA[b]

Item Number	Student Characteristic[c]	Grade 2 Standard Score	Grade 3 Standard Score	Difference (and direction) Equal to or Greater Than Seven Points
	Cognitive Skills and School Adjustment			
1.	Knowledge and skills	64	64	
2.	Concentration	50	41	-9
3.	Enjoyment of school	62	66	
4.	Persistence			
	a) in own interests	59	64	
	b) in assigned tasks	48	34	-14
5.	Responsiveness	62	57	
6.	Intellectual curiosity	57	57	
7.	Pursuit of challenge	52	49	
8.	Perceptiveness	66	62	
9.	Verbal facility	55	55	
10.	Fluency of ideas	52	47	
11.	Flexibility	43	42	
12.	Sensitivity to problems	59	49	-10
13.	Originality	55	44	-11
14.	Imagination	48	49	
15.	Reasoning	57	49	-8
16.	Independence in thought	50	47	
17.	Independence in work	36	29	-7
18.	Elaboration	48	34	-14
19.	Aesthetic appreciation	48	55	+7

TABLE 5 (Continued)

Item Number	Student Characteristic[c]	Grade 2 Standard Score	Grade 3 Standard-Score	Difference (and direction) Equal to or Greater Than Seven Points
	Social Behaviour			
20.	Popularity a) with adults	41	59	+18
	b) with peers	35	43	+8
21.	Acceptance of others	41	55	+14
22.	Status, leadership	18	34	+16
23.	Social maturity	39	51	+12
24.	Sense of humour	46	49	
	Emotional Behaviour			
25.	Emotional stability	43	53	+10
26.	Emotional control	48	57	+9
27.	Openness to experience	57	53	
28.	Enthusiasm	57	66	+9
29.	Self-acceptance	52	47	
	Additional Items	Converted Mean[d]	Mean	Difference
30.	Conformity			
	a) influence of adults	3.5	3.9	+0.4
	b) influence of peers	2.5	3.5	+1.0
31.	Anxiety over achievement	2.3	2.8	+0.5
32.	Competitiveness	3.3	2.7	-0.6
33.	Aggressiveness (intent to hurt)	1.0	1.1	+0.1

[a] Distributions of mean ratings were converted to standard score distributions in order to equate, and subsequently allow comparisons to be made between, the ratings of two different groups of teachers (i.e., 10 Grade 2 teachers in June, 1983, and one Grade 3 teacher in June, 1984).

[b] Only those teacher ratings where data were available for both Grade 2 and Grade 3 were used.

[c] Characteristics are defined on the Teacher Questionnaire, see Appendix D.

[d] Means were decreased by .5 to make them comparable to those of the Grade 3 teacher.

64 and 64; enjoyment of school, 62 and 66; persistence in own interests, 59 and 64; and perceptiveness, 66 and 62). For the purpose of identifying significant changes in ratings between the Grade 2 teachers and the Grade 3 teacher, characteristics for which scores differed in either direction by at least seven standard points (approximately two-thirds of a standard deviation) were selected for further analysis.

The results of this analysis, presented in Table 5, are graphically demonstrated in Figure 2. According to the criterion established (a difference of seven standard points), the following characteristics received significantly higher ratings from the Grade 3 teacher compared to the Grade 2 teachers: social behaviour--popularity with adults (+18), status/leadership (+16), acceptance of others (+14), social maturity (+12), and popularity with peers (+8); and emotional behaviour--emotional stability (+10), emotional control (+9), and enthusiasm (+9). On the other hand, characteristics which received considerably lower scores from the Grade 3 teacher were all related to cognitive skills and school adjustment--persistence in assigned tasks (-14), elaboration (-14), originality (-11), sensitivity to problems (-10), concentration (-9), reasoning (-8), and independence in work (-7). One exception within this set of characteristics, however, was for aesthetic appreciation (a characteristic associated with cognitive behaviour in this study), which was rated higher after Grade 3 (+7).

It will be noted from the tables that an additional four items included in the questionnaire (numbers 30-33) did not readily fit into any of the categorizations delineated above. These were items which were not necessarily related to one another (i.e., they represented unique qualities). In addition,

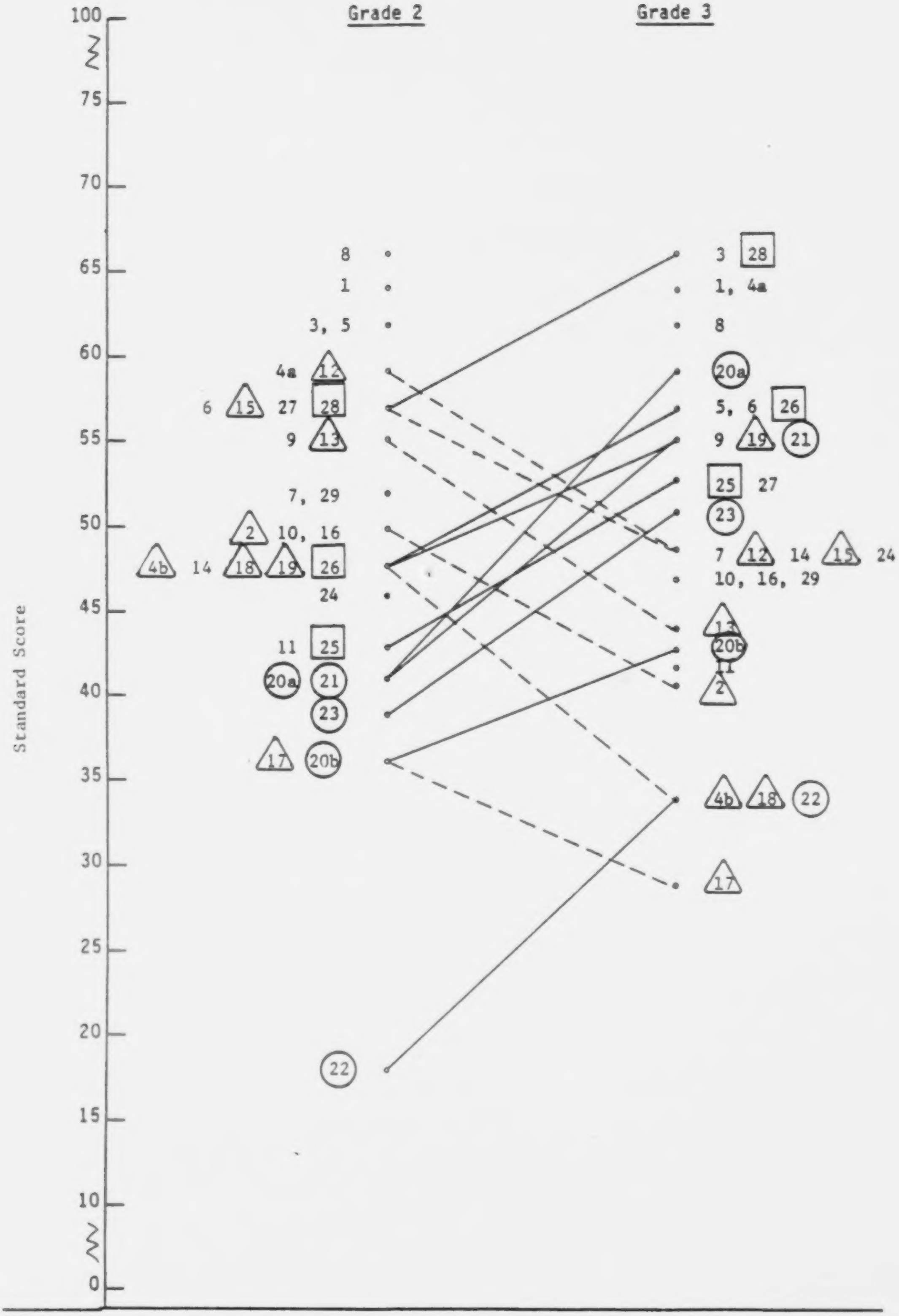

Figure 2. Changes in student characteristics as perceived by Grade 2 and Grade 3 teachers, based on standard scores. (Numbers refer to Item Numbers on Table 5. Lines and shapes represent characteristics, within specified categories where standard scores increased or decreased by seven (7) or more points. △'s are related to cognitive skills and school adjustment, ○'s are related to social behaviour, and □'s are related to emotional behaviour.)

some problems regarding interpretation of the data were possible for some of these items. For example, the rating scale for one item (aggression with intent to hurt) would have to be reversed to be comparable with data from the other items because a lower actual rating would be considered good. In the case of two others, conformity and competition, an element of judgment would be involved in deciding whether the absence or presence of the particular characteristic was desirable or not. The remaining characteristic, anxiety over achievement, would stand on its own. Because of these differences, the ratings obtained for these characteristics were not included in the general comparative analysis described above. Instead, for comparative purposes, the mean scores for the Grade 2 teachers were adjusted (by decreasing each by 0.5--the difference between the general averages of the two sets of data) to make them comparable to those of the Grade 3 teacher (see Table 5). The results of these conversions demonstrated that the level of conformity, through the influence of both adults and peers, was greater after Grade 3 than it was after Grade 2 (average mean change of +0.4 and +1.0 respectively). Students' anxiety over achievement had also increased by the end of Grade 3 (+0.5). However, students' level of competitiveness had decreased (-0.6), according to the relative placement of this characteristic by the Grade 3 teacher, and there had been virtually no change in students' already low level of aggressiveness with intent to hurt (+0.1). (For a compilation of teachers' comments on open-ended questions, see Appendix L).

Parents' Perceptions of Changes in Student Characteristics from Grade 2 to Grade 3

Parents were generally positive in their initial ratings (June, 1983) of their children (see Table 6). An overall average of 3.7 on a five-point scale for all characteristics in the first three behavioural categories (items 3-29), was

TABLE 6

PARENTS' PERCEPTIONS OF STUDENT CHARACTERISTICS AT THE END OF GRADE 2 [JUNE, 1983 (N=14)] AND AT THE END OF GRADE 3 [JUNE, 1984 (N=13)]

Item Number†	Student Characteristic[b]	June	Number of Responses[a]						Mean	Average Change (Paired Samples)[c]
			1	2	3	4	5	NR		
	Cognitive Skills and School Adjustment									
3.	Enjoyment of school	'83	-	2	1	2	7	2	4.2	
		'84	-	-	-	5	6	3	4.5	+0.5
4.	Persistence									
	a) in own interests	'83	-	-	1	5	6	2	4.4	
		'84	-	-	1	7	3	3	4.2	-0.2
	b) in assigned tasks	'83	-	1	4	4	3	2	3.8	
		'84	-	1	3	4	2	4	3.7	0.0
6.	Intellectual curiosity	'83	-	-	2	5	5	2	4.3	
		'84	-	-	2	2	7	3	4.5	+0.1
8.	Perceptiveness	'83	-	-	1	6	5	2	4.3	
		'84	-	-	2	4	5	3	4.3	-0.1
10.	Fluency of ideas	'83	-	-	3	6	3	2	4.0	
		'84	-	-	5	1	5	3	4.0	0.0
11.	Flexibility	'83	-	-	6	4	1	3	3.5	
		'84	-	2	3	5	1	3	3.5	0.0
12.	Sensitivity to problems	'83	-	-	4	7	1	2	3.8	
		'84	-	-	5	5	1	3	3.6	-0.1
13.	Originality	'83	-	-	7	5	-	2	3.4	
		'84	-	-	1	6	4	3	4.3	+0.9*
14.	Imagination	'83	-	1	2	4	5	2	4.1	
		'84	-	1	-	7	3	3	4.1	0.0

TABLE 6 (Continued)

Item Number†	Student Characteristic[b]	June	Number of Responses[a]						Mean	Average Change (Paired Samples)[c]
			1	2	3	4	5	NR		
16.	Independence in thought	'83	-	-	2	8	2	2	4.0	
		'84	-	-	1	1	9	3	4.7	+0.6
17.	Independence in work	'83	-	1	5	3	3	2	3.7	
		'84	1	-	6	3	1	3	3.3	-0.3
18.	Elaboration	'83	-	-	7	3	2	2	3.6	
		'84	-	1	4	3	3	3	3.7	+0.1
19.	Aesthetic appreciation	'83	1	3	3	3	2	2	3.2	
		'84	1	-	5	3	2	3	3.5	+0.5
	Social Behaviour									
20.	Popularity									
	a) with adults	'83	-	2	2	6	1	3	3.5	
		'84	-	-	3	4	4	3	4.1	+0.6
	b) with peers	'83	-	4	5	3	-	2	2.9	
		'84	-	-	4	5	2	3	3.8	+0.9*
21.	Acceptance of others	'83	1	2	2	6	1	2	3.3	
		'84	-	3	2	2	4	3	3.6	+0.3
23.	Social maturity	'83	-	3	5	1	3	2	3.3	
		'84	1	2	3	3	2	3	3.3	0.0
	Emotional Behaviour									
24.	Sense of humour	'83	-	1	5	3	3	2	3.7	
		'84	-	-	4	5	2	3	3.8	0.0
25.	Emotional stability	'83	-	2	5	1	4	2	3.6	
		'84	-	4	3	4	-	3	3.0	-0.4

TABLE 6 (Continued)

Item Number†	Student Characteristic[b]	Grade	Number of Responses[a]						Mean	Average Change (Paired Samples)[c]
			1	2	3	4	5	NR		
26.	Emotional control	2	1	3	3	3	2	2	3.2	
		3	-	5	2	3	1	3	3.0	0.0
28.	Enthusiasm	2	-	2	1	5	3	3	3.8	
		3	-	-	2	3	6	3	4.4	+0.6
29.	Self-acceptance	2	-	1	2	4	5	2	4.1	
		3	-	2	2	6	1	3	3.5	-0.5
	Additional Items									
30.	Conformity									
	a) influence of adults	2	-	2	3	4	3	2	3.7	
		3	-	1	4	4	2	3	3.6	+0.1
	b) influence of peers	2	1	1	6	3	1	2	3.2	
		3	1	1	2	4	3	3	3.6	+0.5
31.	Anxiety over achievement	2	1	3	5	2	1	2	2.9	
		3	-	7	2	1	1	3	2.6	-0.3
32.	Competitiveness	2	-	2	-	5	5	2	4.1	
		3	-	2	-	7	2	3	3.8	-0.3
33.	Aggressiveness (intent to hurt)	2	9	1	2	-	-	2	1.4	
		3	9	2	-	-	-	3	1.2	-0.1

[a] 1 = Very little, 2 = Little, 3 = Moderate, 4 = A lot, 5 = A great deal, NR = No response

[b] Characteristics are defined on the Parent Questionnaire, see Appendix E.

[c] Average change here was based on data from parents whose results were available for both Grade 2 and Grade 3 (t-tests conducted for paired samples). Therefore, degree of change might vary somewhat from the difference between actual means.

† Parents were not surveyed on all the same items as were the teachers, but, for consistency, the same item numbers were retained (therefore, note the omission of item numbers 1, 2, 5, 7, 9, 15, 22, 27).

*Significance <.05

calculated. The parents' highest ratings after Grade 2 were assigned to characteristics of cognitive behaviour and school adjustment: for example, persistence in own interests (4.4), intellectual curiosity (4.3), perceptiveness (4.3), enjoyment of school (4.2), imagination (4.1), fluency of ideas (4.0), and independence in thought (4.0). Near average ratings were given for most characteristics related to emotional behaviour, although self-acceptance was rated at the relatively high level of 4.1. Below average ratings were recorded for several characteristics related to social behaviour, such as popularity with peers (2.9), acceptance of others (3.3), and social maturity (3.3).

At the end of the Grade 3 program, the parents' average rating of 3.9 for these same characteristics indicated that the changes perceived, although not extensive, were generally in a positive direction. In an attempt to determine the significance of the changes on individual characteristics, statistical calculations of t-tests for paired samples (a technique which measures whether a statistical difference exists between two sets of data--pre and post--for the same individuals) were conducted. These revealed that only two significant changes occurred, those being for students' originality and students' popularity with peers (average mean change of +0.9 for both). Other positive trends (although not statistically significant) were evident for independence in thought (+0.6), popularity with adults (+0.6), enthusiasm (+0.6), enjoyment of school (+0.5), and aesthetic appreciation (+0.5). Negative trends were noted in self-acceptance (-0.5) and emotional stability (-0.4).

Regarding the additional items (numbers 30-33), parents' ratings reflected that their children had not really changed in their level of conforming to adult influence at the end of Grade 3 compared to the previous level at the end of Grade 2 (average mean change +0.1). However, parents noted a slight tendency for them to have conformed more to the influences of their gifted peers than to those in their regular Grade 2 class (+0.5). On the other hand, parents tended to rate students' levels of anxiety and competitiveness somewhat lower after the Grade 3 program than after Grade 2 (-0.3). Finally, the already very low levels of aggressiveness with intent to hurt reported in relation to the Grade 2 year changed very little after Grade 3 (-0.1).

Comparison of Teachers' and Parents' Perceptions of Changes in Student Characteristics

In general, parents and teachers were in agreement in their ratings of student characteristics at the end of Grade 2. The highest ratings for both groups were assigned to characteristics related to cognitive skills and school adjustment, and the lowest assigned ratings were associated with social characteristics. However, examination of some of the perceived changes in the individual characteristics within the three categories of behaviours revealed some interesting findings. For purposes of this comparison, those items which have been reported by each group as changing significantly were tabulated on Table 7. (For the parents, this meant statistically significant changes as reported in Table 6; for the teachers, those items in which the standard scores differed by seven points or more, as reported in Table 5, were included.)

Based on such a comparison, it is clear that parents and teacher agreed on the direction and at least some degree of change in only two out of six items in the cognitive skills and school adjustment category (independence in work and aesthetic appreciation). For three of the other characteristics,

TABLE 7

COMPARISON OF SIGNIFICANT[a] CHANGES REPORTED BY PARENTS AND TEACHERS

Item Number	Student Characteristic	Parents (Mean Change)	Teachers (Standard Score Differences)
	Cognitive Skills and School Adjustment		
4b.	Persistence in assigned tasks	0.0	-14
12.	Sensitivity to problems	-0.1	-10
13.	Originality	+0.9*	-11
17.	Independence in work	-0.3	-7
18.	Elaboration	+0.1	-14
19.	Aesthetic appreciation	+0.5	+7
	Social Behaviour		
20a.	Popularity with adults	+0.6	+18
20b.	Popularity with peers	+0.9*	+8
21.	Acceptance of others	+0.3	+14
23.	Social maturity	0.0	+12
	Emotional Behaviour		
25.	Emotional stability	-0.4	+10
26.	Emotional control	0.0	+9
28.	Enthusiasm	+0.6	+9

[a] Significant changes for parents were those where the average mean change was calculated to be statistically significant (from Table 6). For the teachers, those items in which the standard score increased or decreased by seven points were included (from Table 5).

*Significance <.05; other mean changes are presented for comparison only.

persistence in assigned tasks, sensitivity to problems, and elaboration, parents viewed virtually no change, while the teacher reported significant declines. On the final characteristic, originality, change was perceived to be in opposite directions by the two groups.

In the category related to social behaviour, both parents and teacher perceived significant positive change on the characteristic related to popularity with peers. However, compared to the teacher, who perceived great changes in a positive direction for three other items (popularity with adults, acceptance of others, and social maturity), parents either saw no change or certainly did not agree about its extent.

Regarding items related to emotional behaviour, parents and teacher both appeared to be in agreement concerning students' increased enthusiasm for school in the Grade 3 gifted program compared to the regular Grade 2 class. However, parents did not perceive the greater emotional control reported by the teacher and, where the teacher indicated greater emotional stability, parents reported a decreased amount.

Parents' Satisfaction with Various Aspects of Students' Programs

As shown in Table 8, the three aspects of the regular Grade 2 class which were perceived as being the least satisfactory were those rated most satisfactory by the end of the Grade 3 gifted placement. These included the amount of school work given (item 5), the difficulty of the school work (item 6), and the appropriateness of the program (item 7). The strength of parents' sentiments about the program is further illustrated by the fact that only 1 parent of 12 (8 per cent) was very satisfied with the Grade 2 programming for his/her child, whereas 8 of 11 parents (73 per cent) were this

TABLE 8

PARENT SATISFACTION WITH VARIOUS ASPECTS OF THE GRADE 2 AND GRADE 3 PROGRAMS (N=14)

Item	Grade	Number of Responses[a]						Mean	Average Change
		-2	-1	0	+1	+2	NR		
1. Lunch arrangements	2	-	2	-	2	8	2	+1.3	
	3	-	-	-	6	5	3	+1.5	+0.2
2. Transportation	2	-	1	-	3	8	2	+1.5	
	3	-	3	-	1	7	3	+1.1	-0.4
3. Sports facilities	2	-	1	1	9	1	2	+0.8	
	3	-	1	3	3	4	3	+0.9	+0.1
4. Extra-curricular activities	2	1	1	2	6	2	2	+0.6	
	3	-	1	8	1	1	3	+0.2	-0.4
5. Amount of school work	2	2	3	-	5	2	2	+0.2	
	3	-	-	2	3	6	3	+1.4	+1.2
6. Difficulty of school work	2	2	7	-	2	1	2	-0.6	
	3	-	-	1	2	8	3	+1.6	+2.2
7. Appropriateness of program	2	2	5	-	4	1	2	-0.3	
	3	-	-	1	2	8	3	+1.6	+1.9

[a] -2 = Very dissatisfied, -1 = Dissatisfied, 0 = Unsure, +1 = Satisfied, +2 = Very satisfied

pleased with the gifted program (item 7).

There were two aspects of the gifted program which were perceived as being less satisfactory (but not unsatisfactory) when compared to what was available previously in the regular Grade 2 class placement. These were transportation arrangements[1] and extra-curricular activities (see Table 8, items 2 and 4). The remaining two areas, lunch-time arrangements[2] and sports facilities, received satisfactory ratings for both Grade 2 and Grade 3 programs (items 1 and 3). (A compilation of parents' comments related to their satisfaction with student programs can be found in Appendix M).

Students' Perceptions of Grade 2 and Grade 3 Programs

Students' average reactions to their Grade 2 experience can be divided into five categories (see Table 9, first 16 items):

1. Great satisfaction (average ratings from +1.5 to 2.0)--ease of working independently (item 14).
2. Satisfaction (average ratings from +0.5 to +1.4)--lunch time and transportation arrangements (items 1 and 2), sports (item 3), extra-curricular activities (item 4), interaction with classmates (items 5 and 6), level of school enjoyment (item 10), ease with which assignments

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[1] Prior to the program placement, 83 per cent of the students walked to school and 17 per cent were driven by private car. After the program placement, all students were bussed to school.

[2] Prior to the program placement, 17 per cent of the students ate lunch at school, 67 per cent at home, and other arrangements were made for the remaining 17 per cent. After the program placement, all students ate lunch in their classroom at school.

TABLE 9

STUDENTS' PERCEPTIONS OF GRADE 2 (JUNE, 1983) AND GRADE 3 (JUNE, 1984) PROGRAMS (N=14)

Item	Grade	Number of Responses[a]						Mean	Average Change (Paired Samples)[b]
		-2	-1	0	+1	+2	NR		
1. Lunch-time experience . . . *(very unenjoyable/very enjoyable)*[a]	2	1	-	7	2	4	-	+0.6	
	3	-	2	3	5	3	1	+0.7	-0.1
2. Mode of transportation . . . *(very unhappy/very happy)*	2	1	-	1	11	1	-	+0.8	
	3	4	1	3	3	2	1	-0.2	-1.2*
3. Sports activities . . . . . *(very unenjoyable/very enjoyable)*	2	-	-	5	4	5	-	+1.0	
	3	-	1	2	4	5	2	+1.1	+0.1
4. Extra-curricular activities *(very unenjoyable/very enjoyable)*	2	-	1	3	4	6	-	+1.1	
	3	1	-	5	4	3	1	+0.6	-0.4
5. Behaviour toward classmates *(very unfriendly/very friendly)*	2	-	-	4	4	6	-	+1.1	
	3	-	-	4	3	6	1	+1.2	+0.1
6. Classmates' behaviour toward self . . . . *(very unfriendly/very friendly)*	2	2	1	1	7	3	-	+0.6	
	3	-	-	5	5	3	1	+0.8	+0.1
7. Amount of school work . . . *(too little/too much)*	2	5	1	8	-	-	-	-0.8	
	3	1	-	11	-	1	1	0.0	+0.7*

TABLE 9 (Continued)

Item	Grade	Number of Responses[a]						Mean	Average Change (Paired Samples)[b]
		-2	-1	0	+1	+2	NR		
8. Difficulty of school work. . *(very easy/very difficult)*	2	7	3	1	2	1	-	-0.9	
	3	-	3	8	2	-	1	-0.1	+0.8*
9. Level of interest in school work. . . . . *(very uninteresting/ very interesting*	2	-	2	6	4	2	-	+0.4	
	3	-	-	1	3	9	1	+1.6	+1.2*
10. Enjoyment of school . . . . *(not at all/a great deal)*	2	-	1	1	11	1	-	+0.9	
	3	-	1	-	5	7	1	+1.4	+0.5*
11. Opportunities for expanded learning . . . . *(none/a lot)*	2	2	6	2	4	-	-	-0.4	
	3	1	-	4	6	2	1	+0.6	+1.2*
12. Quantity of knowledge gained . . . . *(none/a lot)*	2	3	-	2	8	1	-	+0.3	
	3	1	-	7	4	1	1	+0.3	-0.2
13. Difficulty completing assignments . . . . *(very difficult/very easy)*	2	-	2	4	3	5	-	+0.8	
	3	-	3	7	3	-	1	+0.0	-0.7
14. Difficulty working independently . . . . *(very difficult/very easy)*	2	-	-	2	3	9	-	+1.5	
	3	-	-	5	5	1	3	+0.6	-0.7
15. Creative interests, abilities . . . . *(none/a lot)*	2	-	2	2	5	5	-	+0.9	
	3	-	-	3	6	4	1	+1.1	+0.3

TABLE 9 (Continued)

Item	Grade	Number of Responses[a] -2	-1	0	+1	+2	NR	Mean	Average Change (Paired Samples)[b]
16. Responsibility for completing tasks on own . . *(very bad/very good)*	2 3	- -	1 1	4 7	5 4	4 1	- 1	+0.9 +0.4	-0.4
		Number of Responses[a] 1	2	3	4	5	NR		
17. a) Number of friends at school . . . . *(none/a lot)*	2 3	1 -	2 1	- 3	7 5	4 4	- 1	3.8 3.9	-0.1
b) Close friends at school *(none/a lot)*	2 3	1 -	7 4	- 6	5 2	1 1	- 1	2.9 3.0	0.0
18. Opportunities for interacting with other "like-minded" peers . . . . *(never/very often)*	2 3	4 -	3 4	3 3	4 4	- 2	- 2	2.5 3.3	+0.7

[a] Item numbers 1 to 16 were rated on a negative to positive scale of -2 to +2 (a scale of "polar" opposites); items 17 and 18 were rated on a positive continuum of 1 to 5.

[b] Mean differences here were based on data from students whose results were available for both Grades 2 and 3 (t-test conducted for matched samples). Therefore, degree of change might vary somewhat from the difference between actual means.

*Significance <.05

are completed and responsibility for completing them (items 13 and 16), and creative opportunities (item 15).

3. No decided opinion (average ratings from -0.4 to +0.4)--interest in school work (item 9), opportunities for expanded learning (item 11), and quantity of knowledge gained (item 12).
4. Dissatisfaction (average ratings from -0.5 to -1.5)--amount (too little) of school work (item 7), and difficulty (too easy) of school work (item 8).
5. Great Dissatisfaction (average rating from -1.6 to -2.0)--none.

Average responses to the three remaining aspects of the Grade 2 experience (items 17a, 17b, and 18), which were rated on a positive scale of one to five, may be interpreted as meaning that the students perceived their opportunities for interaction with "like-minded" peers and their number of close friends at school as being at a moderate level (average 2.5 and 2.9 respectively). Their number of general friends at school, however, was perceived as being at a higher level (average 3.8).

By the end of the Grade 3 year, the students' perceptions had changed significantly in almost all the areas related directly to school work. These included amount and difficulty of the work (items 7 and 8), interest level of the work (item 9), enjoyment of school (item 10), and opportunities for expanded learning (item 11). Some improvement, but not sufficiently large to yield statistical significance, was reported for opportunities to interact with "like-minded" peers (item 18). Little change (i.e., less than ± 0.4) was perceived in the following areas: lunch-time experience (item 1), sports activities (item 3), interaction with classmates (items 5 and 6), quantity of knowledge gained (item 12), creative opportunities (item 15), and number of friends--both general and close (items 17a and b). The following areas were rated more negatively (but not significantly so) for the gifted class than for the regular Grade 2 class the previous year: extra-curricular activities (item 4), difficulty being responsible for and completing assignments (items 13 and 16), and difficulty working independently (item 14). A significantly negative change was reported in student perceptions of transportation arrangements (item 2). In this regard, 12 out of 14 (86 per cent) were satisfied with the Grade 2 transportation arrangements, whereas using the bus in Grade 3 resulted in five students (38 per cent) being dissatisfied, three (23 per cent) having no opinion, and only five (38 per cent) being satisfied. (A compilation of students' various likes and dislikes of their school programs can be found in Appendix N).

Changes in Students' Classroom Behaviour

It is evident from Table 10 that students' average "off-task" classroom behaviour[1] per hour was at a low level at the beginning of the Grade 3 placement and that it increased by the end of the school year (see that "off-task" behaviour for group 1 was 4 minutes and 36 seconds in September, 1983, and 11 minutes and 6 seconds in June, 1984). This can be accounted for by the general inhibition experienced by all students at the beginning of a new school year, compared to the greater spontaneity exhibited by the end of the

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[1] "Off-task" behaviour included any behaviours in which a student was engaged that interfered with, or detracted from, participation in assigned classroom or individual activities. These included some behaviours which could be classified as either positive or negative in nature under certain circumstances. (For a complete list of behaviours observed, see Appendix G.)

TABLE 10

STUDENTS' AVERAGE HOURLY AMOUNT OF TIME "OFF-TASK"

Student Groups	June, 1983	September, 1983	June, 1984
(1) Full group	*15 min., 57 sec.* [a]	4 min., 36 sec.	11 min., 6 sec.
(2) 8 original students	11 min., 4 sec.	3 min., 24 sec.	7 min., 42 sec.
(3) Sub-group of remaining 5 students (minus 8 originals)	*23 min., 43 sec.* [a]	7 min., 18 sec.	16 min., 30 sec.

[a] Since June, 1983, data were not available for these groups, "probable" times were estimated from group 2 data.

school year due to the gradual relaxing of constraints, which is typical of classroom management practices. There was some indication, however, based on data from the eight original students (group 2) who were observed prior to their placement in the gifted class, that the increase in "off-task" behaviour just mentioned never rose to a level as high as that observed at the end of Grade 2 in the regular classes (i.e., 11 minutes, 4 seconds for the eight students at the end of Grade 2 versus only 7 minutes, 42 seconds for them at the end of Grade 3). It appears that the sub-group of five students admitted after June, 1983 (group 3), may themselves account for a considerable amount of the "off-task" behaviour observed in the classroom. Note their relatively higher scores compared to the other groups in September, 1983, and in June, 1984. The averages of probable "off-task" behaviour times (based upon Group 2 data) were calculated for the full group and for the more disruptive group of five students simply to assist in interpretation. Using these estimated figures, it can be seen that the amount of such behaviour would have dropped considerably.

As is indicated by Table 11, the type of "off-task" behaviours observed for the full group were most often of the disruptive or acting out variety, rather than of the passive or withdrawal type. Slight differences in rank order positions of some behaviours may be noted when comparing end of Grade 2 and end of Grade 3 data, but the trend is similar for both years.

The Rorschach Personality Test

No consistent changes were detected in the personalities of the nine students who underwent the Rorschach testing (see Table 12). Some children "grew" in one area; some in another. Generalizing about the group as a whole was difficult because few commonalities were observed. Therefore, conclusive statements based on such a small group size would be inadvisable. However, the following tentative and selective findings did emerge:

1) Most children already had a good tolerance to stress when they entered the program; thus one would not expect change. A few children had minor difficulties but improved markedly by the end of the year (see Table 12, item 2).
2) All nine children were indicated to have a low self-concept when they entered the program. Two children made substantial gains; one of them outstandingly so. The others did not appear to change in a statistically significant way (item 6).
3) For seven children, there was a growth in inner resources, in those skills that one can bring to bear in problem situations (item 11).
4) Going into the program, two children had a problem with emotional control; both of these, along with one other child, improved substantially. Two children seemed to have significantly less control after a year in the program (item 4).

TABLE 11

COMPARISON OF AVERAGE AMOUNT OF TIME "OFF TASK" AND RANK ORDER OF BEHAVIOURS FOR EIGHT (8) ORIGINAL STUDENTS AT THE END OF GRADE 2 (JUNE, 1983) AND THE END OF GRADE 3 (JUNE, 1984)

Behaviour	June, 1983		June, 1984	
	Average Time per Student	Rank Order	Average Time per Student	Rank Order
Bothers classmates (making distracting noises, talking with others)	5 min., 14 sec.	1	2 min., 35 sec.	2
Playing, wasting time, inattentive	2 min., 3 sec.	2	2 min., 37 sec.	1
Playing, talking (due to another's intervention)	1 min., 13 sec.	3.5	1 min., 38 sec.	3
Helping another student	1 min., 13 sec.	3.5	0 min., 9 sec.	6
Doing other than assigned work	0 min., 49 sec.	5	0 min., 20 sec.	4
Daydreaming	0 min., 32 sec.	6	0 min., 4 sec.	8
Out of class (bathroom, drink)	-	-	0 min., 13 sec.	5
Excessive, unsolicited help to teacher	-	-	0 min., 6 sec.	7

TABLE 12

CHANGES IN ATTRIBUTES MEASURED BY THE RORSCHACH PERSONALITY TEST FROM THE END OF GRADE 2 TO THE END OF GRADE 3

Attribute	Number of Students		
	Improvement	No Significant Change	Decline
1. Approach to tasks	4	3	2
2. Ability to tolerate stress	3	6	0
3. Flexibility of thought	4	2	3
4. Willingness to display emotions openly	3	4	2
5. Ease with which emotional situations are handled	5	2	2
6. Self-acceptance	2	7	0
7. Willingness to handle complex stimuli	4	3	2
8. Inclination to set realistic goals	3	6	0
9. Reality testing	5	2	2
10. Interest in other people	3	3	3
11. Inner resources to call upon in problem situations	7	1	1

5) Six children were inclined initially to withdraw from emotional situations; however, by year's end, five of the six were willing to expose themselves to greater emotional risk (item 5).

6) This group of children varied considerably at the outset in their interest in other people. Only three had a great deal of interest; all others had less than average interest. At the end of the year, there was still variability in the direction of the results, with three children improving, three children declining, and three showing no change on this attribute (item 10).

7) Not surprisingly, these gifted children tended to view the world and their experiences differently than did the average child. By year's end, the general movement had been toward a more conventional view, with only two children declining (item 9).

8) Most of the children were inclined to be realistic in their goal-setting, even as they came into the program, but three were obviously encouraged to reach out for higher goals during this period (item 8).

Other results of the Rorschach testing indicated that the experience of being in the class did affect some children's problem-solving style. Those who were introversive to begin with tended to become more extratensive (willing to express emotions openly), and those who tended to vacillate from one style to another did not change much. Only one child changed from being extratensive to introversive. Four children showed a decline in their need for physical demonstrations of affection; however, two children seemed more inclined to introspect negatively.

An informal meeting was held with the Grade 3 teacher after all tests had been scored (but before the teacher was informed of the results). Each child was discussed in some detail, and the teacher was asked for perceptions of the child and of the socio-emotional progress made. While there was not a one-to-one correlation between the teacher perceptions and the Rorschach measures, there were remarkable similarities. It was particularly noticeable that, whenever the teacher had recognized an emotional need and had consciously worked to meet that need, the Rorschach results reflected this.

Input from Grade 4 Teachers of the Gifted Program (1983-84)

When asked about differences between the Grade 4 students in their classes who had participated in the Grade 3 gifted program (in 1982-83) compared to those who had been placed in the gifted program for the first time at the Grade 4 level, all three of the responding teachers felt that, overall, students benefitted from the Grade 3 placement (total number of Grade 4 teachers was four). Most teachers indicated that these students performed better initially than their newly-admitted Grade 4 peers in all areas including academics, social adjustment, behaviour, and work habits (see Table 13 and Appendix O).

TABLE 13

PERCEIVED DIFFERENCES BETWEEN GRADE 4 GIFTED STUDENTS WHO HAD PARTICIPATED IN THE GRADE 3 GIFTED CLASS AND THOSE WHO HAD NOT

Type of Difference	Number of Responses		
	Grade 3 Gifted Better	Grade 3 Gifted Not Better	No Response
Academic difference	2	1	1
Social difference	2	1	1
Behavioural difference	3	0	1
Difference in work habits	2	1	1

Gifted Programs in Ontario

In an attempt to gain some information on the existence of elementary gifted programs in Ontario, a survey of selected Boards was conducted. The results reported are reflective of the situation as of June, 1984. Of the 43 questionnaires distributed, 39 (91 per cent) were returned (Scarborough was not included).

At the primary level (Grades 1 to 3), 22 of the 39 Boards (56 per cent) were offering some type of gifted program. The types and numbers of programs available were as follows: Enrichment 16, Withdrawal 16, Self-contained class 6, and "other" 2[1] (see Appendix P for an explanation of these programs).

At the junior level (Grades 4 to 6), 31 of the 39 Boards (79 per cent) were offering some type of gifted program. The types and numbers of programs available were as follows: Enrichment 15, Withdrawal 22, Self-contained class 11, and "other" 2.[1]

Since the focus of this study was on a Grade 3 self-contained class, it was considered important that the names of Boards offering similar types of programs be specified so that future contact could be made if it was desired. Although the current researchers would have liked to have compared various aspects of Scarborough's primary self-contained class with the others (North York, Ottawa, Etobicoke, Niagara South, Wentworth County, and Durham), this was deemed to be outside the mandate of the study. Also, a number of larger Boards in the province known to have gifted programs did not reply to this question. One possible explanation could be that students participating in these programs have not undergone full formal assessment procedures, as will be required by September, 1985, according to the Education Act, Chapter 129, Section 147 (7) (Ministry of Education, 1983).

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[1] Often more than one type of program was available within one Board; hence, the number of programs is greater than the number of Boards responding.

In response to the survey question about whether any formal evaluations of Boards' gifted programs had been conducted, six replied in the affirmative. Again, for possible future reference, the names of these Boards are as follows: Ottawa, Etobicoke (currently carrying out a study of identification of gifted students at Grade 2), Wellington County, Halton, Brant (study in process of completion), and Windsor.

The number of Boards planning to offer new or expanded programs for gifted students in the coming school year (1984-85) was as follows: primary level, 17 of 39 (44 per cent); junior level, 24 of 39 (62 per cent).

IV. DISCUSSION

In its commitment to provide special education for all qualifying individuals, the Scarborough Board of Education has undertaken to assess the status of one of its pilot projects, the Grade 3 gifted self-contained class at Churchill Heights Junior Public School. The Grade 3 program has been the first attempt to offer a full-time class at the primary level. When this program was first implemented in September, 1981, it was as somewhat of a precedent in Ontario. It may be noted from a survey conducted as part of this study, however, that by June, 1984, at least another six Boards of Education in the province claimed to be offering segregated programs for primary gifted students (see "Results", page 55). The Grade 3 class in Scarborough has continued to function for more than three years (at the time of writing). Now, based on the information contained herein, a decision about the future continuation and nature of this program can hopefully be made.

In the following sections, an attempt will be made to synthesize the data collected for this study according to educationally relevant topics.

Academic and Cognitive Functioning

A review of students' academic performance confirms the superior functioning of these students compared to their peers. However, it is felt to be a somewhat meaningless comparison since the intellectually gifted student would be expected to surpass the academic performance of the average student. It is obvious that, for a valid comparison to be made, a group of equally able students not enrolled in the experimental program should have been available. Unfortunately, it was not possible to employ a control group for this study (see reasons outlined on page 9); therefore, the results must be interpreted as changes occurring within the group itself. However, because of this pre-condition, care should be exercised about attributing cause for the gains and losses reported to the gifted program specifically.

Reading and mathematics. It is important to document that, in fact, academic gains were made by these students during this year. All students made advances in reading (average gain 1.3 of a grade level). The greatest gains were made by three of the four students with the lowest pre-program scores (average pre-program grade level of 4.2, average post-program grade level of 6.4, for an average overall gain of 2.2). The fourth student advanced from a 3.9 to a 4.9 grade level score. Therefore, three-quarters of the relatively low-achieving readers were assisted in realizing considerably greater than expected gains during the experimental year. Most students advanced in mathematics as well; an average gain of 1.1 grade levels was achieved in computation, and 1.4 grade levels in application. However, the individual student results revealed no clear cut pattern, as was evident with reading, which would help determine which type of student gained the most. There were some instances where either minimal progress was made, or even some slight regression was noted, but it cannot be accounted for readily.

Although a review of IPRC (Identification, Placement, and Review Committee) records was not one of the data collecting procedures originally included in the design of this study, it was considered subsequently to be a source of valuable information in light of the previously stated need to use the group as a control for itself. In a summary which was compiled by a researcher from these records (manual checklist), it was indicated that, in

11 out of 14 cases, students required a greater challenge and more stimulation in their academic program. Parents and students themselves confirmed this assessment by giving negative or very low ratings on their respective questionnaires about the amount, type, and difficulty of school work presented in the regular Grade 2 program (see Table 8, items 5 and 6, and Table 9, items 7, 8, 9, 11, and 12). One of the intents of the Education Act of Ontario is the provision of appropriate academic programming for all students (The Education Act, R.S.O. 1980, Chapter 129, Section (8(2)). It would appear from the achievement grades presented above and the improvement in parents' and students' ratings of variables related to school work in the Grade 3 program that a positive claim can be made about efforts to meet the academic needs of these students in the gifted class.

Cognitive functioning. Another related aspect of the study had to do with cognitive functioning. In general, this was one of the only areas in which the teachers' ratings changed in a negative direction and often significantly (see Table 5, items 2, 12, 13, 15, and 18). Parents, on the other hand, generally reported little significant change in these characteristics, although the trend was toward improvement where change was reported (see Table 6, items 13, 16, and 19). (Note that parents were not questioned about concentration, verbal facility, or reasoning because it was felt that these characteristics were too closely tied to classroom behaviour as defined, and therefore out of the range of parental scrutiny.) The only one of these cognitive characteristics to which students were asked to respond was one related to creativity, for which minimal change in a positive direction was reported (see Table 9, item 15).

By way of explanation, the following possibilities are offered for consideration: (a) The teacher of the Grade 3 gifted class would have higher standards for these students regarding cognitive performance than would the regular Grade 2 class teachers. This would account for the drop in the Grade 3 teacher ratings. A positive interpretation of these findings is that for the first time the cognitive abilities of these students are being truly challenged. (b) The lack of overt change reported by the parents may reflect a more reliable (consistent) judgment in that the same evaluators (parents) responded both before and after the gifted program. It is encouraging to note that most changes perceived by parents were in a positive direction. (c) Perhaps cognitive functioning is highly resistant to change and not sufficiently affected by the influence of only one year of intervention.

Approach to learning. A number of other characteristics which were surveyed for this study can be clustered together to describe a student's approach to learning, or learning style (i.e., persistence, responsiveness, pursuit of challenge, and independence in work). No significant positive changes were perceived by either the parents or the teacher in this regard. Changes which were detected were either minimal (see Table 5, items 4a, 5, and 7 for the teacher; and Table 6, items 4a, 4b, and 17 for parents), or in a negative direction (see Table 5, items 4b and 17 for the teacher). Mixed findings were also reported for the students on items related to these characteristics on the Rorschach Test (see Table 12, items 1, 7, 8, and 11). As was speculated above, in regard to cognitive functioning, the teacher's expectations vis-à-vis students' abilities to apply themselves to learning may have been comparatively higher in the gifted class setting.

Social Behaviour

At the end of Grade 2, characteristics related to social behaviour were generally amongst those rated at the lowest levels, by both parents and teachers, in comparison with behaviours in the other two categories.

Examination of a sub-group. Closer examination revealed that only a few individual students were probably responsible for weighting these results in a negative direction. In a review of the IPRC referrals, most of the students (8 of 14) were described as having adequate relationships with their peers prior to admission to the gifted class; in four cases (29 per cent) difficulties were reported. Similarly, it can be seen from the teachers' ratings in Table 3 (items 20 to 24) that there were one or two individuals who were rated at the extreme low end of the scale.

In a follow up of the ratings of the four students identified by the IPRC as having difficulties, results showed that the social behaviour of three had improved by the end of Grade 3, according to the teacher's perceptions. Furthermore, end-of-the-year ratings by the parents indicated that they agreed generally with the teacher that there had been a moderately good level of socialization attained by these students during the year in the gifted class. Amongst the best ratings by both groups were those for popularity with adults. One might speculate that, for these students, there was relief from the previous placement in a classroom environment which was incongruent with their social needs, as well as the comforting experience of now being placed with a teacher knowledgeable about and sensitive to their problems.

Whole group (all 14 students in the class). In a review of the social situation of the whole group at the Grade 2 level, it was evident that most

(71 per cent) of the students, as far as they themselves were concerned, reported favourably about interactions with their Grade 2 classmates, although 3 of 14 students rated the behaviour of peers as very unfriendly (Table 9, items 5 and 6). Regarding friendships, although most of the students claimed to have friends at school in Grade 2, in 8 of 14 cases (57 per cent) these were not considered to be close friends (Table 9, items 17a and b).

These findings concur with a number of studies which have been summarized by Miller (1978). It was concluded that most gifted students are at least accepted by their more-average peers, and even sought out because of their knowledge and enthusiasm for learning. However, it appears that the feeling may not be one of mutual admiration (see Table 9, item 18).

To what extent, then, was the Grade 3 gifted class placement successful in promoting an appropriate social climate for these students? Clearly, there was an overwhelmingly positive indication by the teacher that students had benefitted socially by the Grade 3 experience. This was particularly true for popularity with adults and acceptance of others, where ratings were greater than the average. However, there still may be some concern over two characteristics, popularity with peers and status/leadership, where, although improvements were noted, scores were well below average (Table 5, items 20b and 22). By contrast, parents saw the greatest, and only significant, social benefit to have been in relation to popularity with peers (Table 6, item 20b). This lack of agreement between the Grade 3 teacher and the parents regarding popularity with peers may be resolved somewhat by the students' own reports on matters related to social relationships. For instance, on most of these matters (see Table 9, items 5, 6, 17a, and 17b), students did not report any apparent change from the rather moderate (overall) ratings of the Grade 2 situation. Students' only favourable social impressions after Grade 3 were related to their opportunity to interact with other "like-minded" peers (item 18), which received a similarly high rating from the parents.

Finally, although notable improvements were perceived as being made in many aspects of social behaviour, variables related to this category were still rated overall amongst the lowest by teachers and parents. For instance, results of the Rorschach test demonstrated that only three of the students had made significant improvement in their interest in other people. Perhaps it is unfair to expect these students to develop close personal friendships with classmates based solely on the criterion of shared giftedness. As implied by the parents' responses, one cannot assume that intellectual precociousness guarantees social maturity (see Table 6, item 23). Perhaps the relatively short, one-year time period is insufficient to make up for this developmental lag.

Emotional Behaviour

Variables related to affective functioning play a particularly important role in this study, because it was largely upon such criteria, as understood by members of the committee, that a decision to admit a student to the gifted program at the preliminary, experimental Grade 3 level was made. In other words, according to the criteria established by the Scarborough Board of Education in 1981 (at Board Meeting #2 on January 5, 1981), one of the distinguishing characteristics of students admitted to the Grade 3 class was a relative level of emotional stability (relative to the intellectually "average" student). To emphasize the point further, there were three qualifications to be considered when placing potential candidates in the Grade 3 class (as stated in the Plans for the Development of Special Education Programs and Services in Scarborough, 1984), two of which are relevant here:

1) Some evasive behaviour may be seen in such children, but this will be acceptable to the program only if its root cause is felt to be classroom frustration . . ."

2) In general our concern is for the lack of development of intellectual functioning and the deterioration of attitudes and work habits.

The results of the current investigation demonstrated that some differences of opinion existed about the initial presence of emotional difficulties. According to the Grade 2 teachers' reports, there was little indication that students' emotional problems were considered to be excessive in number or kind at the time of referral for special class placement. These teachers' assessments of emotional factors averaged a reasonably healthy 4.1 on a 5-point scale (see Table 3, items 25, 26, 27, 28, and 29). The lowest rating was 3.8 for emotional stability, which was defined as the ability to cope with normal frustrations of living and to adjust to change with a minimum of difficulty. Only one student was described as displaying nervous anxiety on the IPRC form. Parents' ratings were slightly lower (average 3.7; see Table 6, items 25, 26, 28, and 29); in particular, emotional control (ability to express and display emotions appropriately) was rated at a moderate level of 3.2. Most illuminating and most negative was the Rorschach test finding that all nine students who participated in this testing scored low levels of self-concept upon initial assessment. As well, two-thirds of these students were uneasy in emotional situations.

Results tabulated at the end of the program indicated a general improvement in many emotional behaviours. According to the perceptions of the

Grade 3 teacher, emotional stability, control, and enthusiasm had all improved significantly. A negative trend was noted in self-acceptance. Parents' ratings reflected some decline (although not significantly so) in emotional stability and self-acceptance at the end of the program. According to the Rorschach results, two students improved substantially on the measure related to self-acceptance, although no significant changes were apparent for the remaining seven. Other more positive results were detected by the Rorschach for amount of growth in inner resources and in emotional control.

One must conclude that no consistent patterns of change emerged for variables related to emotional behaviour. Due to some of the conflicting findings (e.g., parents' and the teacher's results in the opposite direction for emotional stability) and the highly individualized nature of some of the results (e.g., Rorschach), it would be misleading to state that as a group these students were more or less disturbed or distressed prior to, or subsequent to, the gifted class placement. Instead, one would be most safe in acknowledging that problems related to emotional security existed for some of these students in both classroom settings, but that the emotional behaviour of some individuals was positively influenced in the gifted class.

Some of the concerns which may affect behaviour in this area might be related to the following: (a) The high demands which are placed upon these students by the program, in terms of such elements as achievement, productivity, and responsibility, may cause self-doubt for a student encountering difficulty living up to these expectations. (Indeed, the students, themselves, rated the following areas as presenting more difficulty in the Grade 3 class: completing assignments, working independently, and being responsible for assignments; see Table 9, items 13, 14, and 16.) (b) The possibility exists that these students might have attained a special status in their regular classes which could vanish with their placement amongst other gifted individuals; this, in turn, could result in a loss of self-worth. Attention should be drawn here to the repercussions often suffered by these students as a result of their gifted label (Sapon-Shevin, 1984) and condition (Tuttle, 1983) (see "Review of the Literature," page 7). (c) Another possibility may be related to the noted decline in competitiveness within the Grade 3 class (Table 5, item 32). If the value placed upon inter-personal competition was perceived as high in their regular school (and possibly at home as well), and the importance of this value was reduced in the gifted program, students may have experienced a sense of cognitive dissonance which reflected poorly in their self-esteem. (d) The effects of being uprooted from one's "home" school and the concomitant adjustment to a totally new environment should not be underestimated. In a study referred to in the introduction of this study, it was reported that feelings of insecurity were experienced at the outset of a gifted class placement. These feelings ultimately became more positive in subsequent years.

Classroom Behaviour

It should be pointed out that observational data obtained for this variable may not be as reliable as data obtained for other variables. Problems in the development of an observation instrument and satisfactory recording techniques, as well as in the fact that there were missing subjects for the initial observations (as discussed previously), account for this situation. Even though this renders information obtained by this method less reliable, some of the trends in the data are interesting to note.

The types of "off-task" behaviours displayed by these students were reasonably consistent from Grade 2 to Grade 3. The typical misbehaviours were general classroom disruptiveness and inattentiveness. Due to incomplete data, it was difficult to say definitively whether the amount of these behaviours declined from the end of Grade 2 to the end of Grade 3, although there were some indications that it had.

It was certain, however, that behaviour of the passive, or withdrawn, nature was rare. On the other hand, both parents and teachers rated students' aggressive tendencies (i.e., with intent to hurt) quite low (see Tables 5 and 6, item 33).

To help reach some conclusions regarding individual students, a separate analysis of four students with higher than average levels of misbehaviour (of the acting out variety) at the beginning of the Grade 3 program was conducted. (For interpretive purposes, it should be noted that these were four of the five students mentioned on page 49.) It was revealed that, in the case of two of these students, such behaviour was dramatically reduced by the end of the program and that a related improvement in self-acceptance had also been reported. This should be considered together with the anecdote described on page 53, where improvement occurred after the teacher had targeted specific behaviours for modification. In other words, students who were the most disruptive initially seemed to benefit by participating in the program.

Conclusions

Based on the evidence gathered for this study, there is no doubt that most students flourished academically in the gifted class setting. Whereas, at the beginning of the program, a number of the students would have qualified as gifted under-achievers in various areas (reading, mathematics computation, mathematics application), by the end of the program, these instances were almost totally eliminated for reading, and greatly reduced for both areas of mathematics (computation and application).

In spite of these academic improvements, the study reveals, in its assessment of cognitive skills, that based on teacher ratings alone, student functioning in this area actually appeared to diminish subsequent to participation in the gifted program. However, when one considers that in all likelihood a teacher of the gifted would have different standards and expectations regarding intellectual abilities, the perception of decline can be understood. As well, parents' responses revealed no significant losses in these ratings, thus lending little credence to the possibility of decline in cognitive functioning.

Regarding the socio-emotional status of these students, one must be cautious about making a generalized statement. It became apparent upon analysis that one was not investigating a homogeneous group of students. There were great differences among individuals on various aspects of social and emotional adjustment. There were also some discrepancies between the way parents, teachers, and students viewed a number of these functions. Problems of a socio-emotional nature existed in varying degrees prior to the special placement of these students. It appeared as if some of these problems were alleviated for some of these students in the Grade 3 gifted class, particularly the most pronounced social problems and, to some extent, the problems of emotional adjustment and classroom behaviour. However, because of the sometimes contradictory results, one might ask whether, in fact, the milieu created in this custom-designed class is an effective one, and/or whether the problems encountered by some of these students are so deeply entrenched as to be almost intractable within the context of what the program currently offers. Is it unrealistic to expect changes in affective and social behaviour, particularly after only one year? Perhaps there is a discrepancy between the needs of the students admitted to this program and the objectives as stated. In fact, examination of the program's objectives might legitimately lead one to question whether provision for the development of social and emotional needs has been specified adequately.

In the final analysis, some satisfaction can be derived from the success in identifying candidates for this program. There was no indication that any of the students had been inappropriately placed, or had failed, or had suffered as a result of placement in this class. All students who entered the program demonstrated some degree of underachievement (for them) and/or were described as displaying social and/or behavioural difficulties. Deprived of the opportunity to employ a control group (the reasons for which have been discussed previously in this report), one can only speculate as to what might have happened if the students who participated in this pilot program had remained instead in a regular Grade 3 class. The Grade 4 teachers of the gifted classes at Churchill Heights did provide some information in this regard (see Appendix O). For instance, they reported about the boredom which had been experienced by some of the gifted students not admitted to the program until Grade 4. Also, they agreed generally that those students who had participated in the Grade 3 pilot program performed better at the outset of Grade 4 compared to their gifted peers who had just been admitted to the gifted program. This is particularly revealing since the pilot students were selected because of notable problems. In the end, it is reassuring to reflect on the general agreement by parents, students, and teachers in this study that, overall, the Grade 3 gifted program was a beneficial one and that significant gains were made in many of the areas studied.

Summary of Findings and Implications

There were obvious gains and positive effects, as well as some less encouraging findings, reported in this study. Amongst them are the following:

Positive Findings.

1. Average grade level for reading changed from Grade 5.8 at the beginning of Grade 3 to Grade 7.1 at the end of Grade 3.
2. Average grade level for arithmetic computation changed from Grade 3.8 at the beginning of the program to Grade 4.9 at the end of Grade 3.
3. Average grade level for arithmetic application changed from Grade 4.9 at the beginning of the program to Grade 6.3 at the end of Grade 3.
4. All students made gains in reading. Particularly pronounced were the gains for three of the four students with the lowest Grade 2 scores.
5. All students but one made gains in mathematics computation scores, and all but two students gained in mathematics application scores.
6. Parents, students, and teachers alike were unanimous in rating students' enjoyment of school and enthusiasm for school very high at the end of the gifted program.

7. Students' ratings improved significantly by the end of Grade 3 in almost all areas related directly to school work, including amount and difficulty of the work, interest level of the work, and opportunities for expanded learning.
8. The three aspects of the regular Grade 2 class which were perceived by the parents as being the least satisfactory were those rated amongst the most satisfactory by the end of the Grade 3 gifted placement. These included the amount of school work given, the difficulty of the school work, and the appropriateness of the program.
9. Parents rated their children as improving significantly in originality and in popularity with their peers between the end of Grade 2 and the end of the Grade 3 gifted program.
10. Initial teacher ratings of social behaviour were amongst the lowest of all the areas investigated. End of Grade 3 ratings indicated that significant overall improvement was perceived by the teacher of the gifted class to have been made by most students.
11. According to teacher ratings, students were viewed to have become increasingly more stable in most characteristics related to emotional behaviour by the end of Grade 3.

Negative Findings.

1. The Grade 3 teacher at the end of the year rated many variables related to cognitive behaviour (such as sensitivity to problems, originality, reasoning, and elaboration) at significantly lower levels in comparison with ratings by the Grade 2 teachers. It should be kept in mind that, in

the area of cognitive functioning, the expectations and standards of the regular Grade 2 class teachers and the Grade 3 gifted class teacher may have been quite different.

2. Similar significant negative differences between sets of teacher ratings (Grade 2 and Grade 3) were found for variables related to school adjustment (including concentration, persistence in assigned tasks, and independence in work). A reason similar to that above (in number 1) should be considered.
3. Students reported some difficulty in being responsible for and in completing assignments, as well as working independently in the Grade 3 class.
4. Two aspects of the gifted program were rated by the parents as being less satisfactory (but not unsatisfactory) when compared to what was available previously in the regular Grade 2 class placement. These aspects were transportation arrangements and extra-curricular activities.
5. Students reported significantly less satisfaction with the Grade 3 transportation arrangements (bus) compared to the Grade 2 arrangements (walking or private car).
6. Rorschach personality test results indicated that students selected for the program suffered from low levels of self-esteem and that limited changes in a positive direction were evident upon completion of the Grade 3 placement.

In summary, the purpose of this study was to describe the strengths and weaknesses with which students enter and leave the Grade 3 gifted class (one stage of formative research). This should be seen as a preparatory step to further formative evaluation (of the current program and its objectives) and then of subsequent evaluation of the achievement of these objectives (summative research). Some mention has been made that possible future investigative directions may also include a more careful analysis of individual needs of the students. Specific plans to help meet these needs could then be worked out, in consultation with the Board's Psychological and Psychiatric services,[1] with a focus on developing aspects of the program which would promote a more positive and healthy orientation for these students.[2] Plans for implementation of these aspects on an experimental basis, with a long-term monitoring of the students, would be integral to the future planning and direction of programs for primary gifted students.

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[1] The Chief Psychologist has indicated an interest in such plans.

[2] See Mary M. Frasier, "Knowing Myself - The Gifted Student." Teaching Exceptional Children 14(6) (May, 1982): 240-241.

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APPENDIX A

Report to the Education Committee on
December 8, 1980.
Pilot Primary Gifted Class at
Churchill Heights Junior Public School

PART II

Item 1.
(Pages 100 - 105
+ appendices) Page 100.

To the Chairman and Members
of the Education Committee:

PILOT PRIMARY GIFTED CLASS AT CHURCHILL HEIGHTS JUNIOR PUBLIC SCHOOL

At Board Meeting No. 5, on March 26, 1979, the following motion was passed:

> WHEREAS the Committee for the Gifted was established in response to a Board random survey in 1972-73 which showed a 69.8% request for gifted and enrichment education,
>
> BE IT RESOLVED THAT this Committee be re-convened to study further and report to the Board on the extension of the highly successful program to the Primary level.

The committee was formed (Appendix "A") and has met on many occasions to study this question.

Some time was spent examining the literature and research in the area of primary gifted (Appendix "B"). Although much has been written, there are no conclusive research studies to give direction as to the optimum age for beginning withdrawal gifted programs. One such program, the Astor School in New York (Appendix "C"), appears to have had success in dealing with primary youngsters from age four years, on a withdrawal basis.

The committee conducted a survey to ascertain the needs in the schools and the opinions of principals, parents of gifted students, and gifted students themselves. A copy of the survey form and results from these groups is included as Appendix "D". Although the findings were not conclusive, the principals did identify some potentially gifted primary students whom they considered to be in need of greater assistance than could be given in a regular classroom. The results also indicated that all three groups had some concerns about withdrawing primary-age students; and the younger the students, the stronger the concerns were.

After discussing the research and the opinions of principals, parents and students, much time was spent by committee members debating the issues involved.

As a result of these debates, the following motion was presented and endorsed:

> THAT this committee recommend the establishment, at Churchill Heights in September, 1981, of a segregated class for Grade 1-3 children, consisting of up to twelve children with one teacher. If the numbers exceed twelve, up to a maximum of eighteen, one teacher-aide will be added; and that it be a pilot project, to include on-going evaluation.

With the passing of this motion, a sub-committee was directed to prepare a report concerning the purposes of the program and the assessment and selection procedures. This report was considered and endorsed by the Primary Gifted Committee and is included as Appendix "E".

Your officials believe there is merit in establishing a pilot project of one class in Gifted Education for Primary students at Churchill Heights Junior Public School. This class would accept mostly Grade 3 students but would consider Grade 1 and 2 students provided there is strong evidence that the child's needs cannot be met in a regular classroom program.

Staffing

The staffing ratio of the proposed Primary Gifted Class is the most difficult question. Although Bill 82 has not passed its final reading, it appears that the recommended staffing ratio for Gifted Classes will be 25:1. Our program at Churchill Heights Junior Public School has been established on a 12:1 basis. The extra allocation necessary to operate on this ratio has come from the regular Borough staff allocation.

Admission Criteria

The admission criteria for the regular Gifted Program are as follows:

- intellectual functioning at an I.Q. rating of 140 plus (usually on a Wechsler test)
- eagerness to learn (not just academics)
- multi interests
- task commitment
- stability of residency
- relative emotional stability
- marked success in some academic area
- child's desire for the program
- parental support for the program
- inadequate adjustment to the home school

As well as these listed criteria, entrance to the Primary Gifted Program will require that the candidate have a demonstrated need which cannot be met in a regular school setting (Appendix "E").

Location

Churchill Heights Junior Public School

Accommodation

Accommodation is a concern at Churchill Heights Junior Public School and crowded conditions will continue for the next two or three years. Therefore, any addition to the program will require additional portables. The present accommodation and accommodation uses are as follows:

Accommodation

Kindergarten	1
Classrooms	22
Portables	2

Accommodation Uses

Regular Program

Kindergarten	1
Classrooms	10
Comprehensive Class	1

Gifted Program

Classrooms	11
Portables	2

Enrolment figures for the Regular and Gifted Programs are as follows:

Regular Program		JK	SK	1-6	S.E.	Total
Actual September	1980	20	34	248	10	312
Projected September	1981	20	25	238	10	293
	1982	20	25	208	10	263
	1983	20	25	186	10	241
	1984	20	25	166	10	221
	1985	20	25	156	10	211

Gifted Program		4	5	6	7	8	Total
Actual September	1980	37	46	38	38	18	177

Because of the decline in the Regular Program, it is anticipated that one classroom may become available for use by the Gifted Program by 1982 and a further one or two by 1984. However, before classrooms are available due to enrolment decline, the Gifted Program, as presently constituted, will require additional space. For example, in September 1981, at least two more teaching spaces will be required at the Grade 7 and 8 levels.

If the Primary Gifted Program is added in September 1981, another additional portable will be required by the Gifted Program, making a total of five portables on site. As indicated above, in September 1982, a reduction of one portable would be possible, but if the Primary Gifted pilot is successful and this program is expanded, then further accommodation would be necessary. The following table indicates the number of portables on site over the period 1981 to 1985:

	Gifted Program with No Primary Component	Primary Gifted Program	Total Portables on Site
1980 Actual	2		2
1981 Projected	4	1	5
1982	3	1	4
1983	3	1	4
1984	2	1	3
1985	2	1	3

It should be noted that in the preceding data, no provision has been made for any accommodation for the Regular Program beyond that required for its Kindergarten, Regular Classrooms and Special Education Room.

Future Accommodation Problems

In the above projection of the accommodation situation, it is assumed that the Primary Gifted Program is kept to the pilot enrolment of one class.

If the Primary Program were to expand to the same numbers per grade as in the Junior and Senior Programs, then three classes at each of Grades 1, 2, and 3 must be projected. This would mean a requirement of an additional eight or more portables over those shown above.

The portables shown in the projection of enrolment or mentioned above, would provide only basic classroom requirements. If specialized rooms are considered, such as a Science Room, then additional portables would be required.

Grade Level

The students will be mostly from Grade 3. (Children from Grades 1 and 2 considered and admitted on the basis of need.)

Admission Requirements

Principals are requested to refer to Psychology those primary students who meet the criteria established above and who cannot be adequately provided for in the regular school. Parents may request principals to provide assessment. Psychology will assess all applicants and make recommendations to the regular Pupil Placement and Review Committee - Gifted.

Transportation

Provided by Board bus similar to that already provided for the Gifted Program at Churchill Heights Junior Public School.

Evaluation

The program will be subject to constant evaluation by the principal, area superintendent, Psychology, and Program Departments. No changes would be made in the program prior to another Board report.

RECOMMENDATIONS:

(a) That the report on the Pilot Primary Gifted Class at Churchill Heights Junior Public School be received;

(b) That a Pilot Primary Class (Grades 1-3) be established for gifted students at Churchill Heights in September, 1981;

(c) That the admission criteria to be applied by the Pupil Placement and Review Committee - Gifted for this class be as follows:

- intellectual functioning at an I.Q. of 140 (usually on a Wechsler test)
- eagerness to learn (not just academics)
- multi interests
- task commitment
- stability of residency
- relative emotional stability
- marked success in some academic area
- child's desire for the program
- parental support for the program
- inadequate adjustment to the home school

As well as these listed criteria, entrance to the Primary Gifted Program will require that the candidate have a demonstrated need which cannot be met in a regular school setting (Appendix "E");

(d) That this class contain up to twelve students with one teacher from regular staff allocation, and if the number exceeds twelve, up to a maximum of eighteen, one teacher-aide will be added;

(e) i That an additional psychologist be hired (on a permanent basis) by December, 1980, to assist with the assessment of these candidates;

ii That one other full time psychologist be hired for the equivalent of one year only to assist with the extra work-load of the first year's operation;

(f) That this program receive on-going evaluation by the principal, area superintendent, Student and Community Services, and Program Departments.

(g) That the Program Department continue to study other ways of assisting those students not in withdrawal classes.

C. A. COWAN, Superintendent of Program	J. J. WATT, Assistant Director of Education	W. A. PARISH, Director of Education

December 8, 1980
CAC/JJW/WAP/fk

APPENDIX B

Objectives of the Pilot Primary Gifted Class

OBJECTIVES
GRADE 3 PILOT GIFTED PROGRAM

Objectives for gifted children should be applicable to all children because gifted children are children first, and more like most children than they are unlike them. However, the gifted tend to approach these objectives with a different learning pace. They use different processes of learning and produce more advanced products.

1. To help students develop initiative and a sense of responsibility for self-set goals

    - students will learn to set goals related to their class work through a weekly work contract.

    - this will allow students flexibility in terms of when they do the work and some flexibility in choice of what they do.

    - it will also allow the teacher more time to confer with individual students and monitor their progress.

2. To encourage student interaction with peers and foster their sense of responsibility for each other.

    - it's a new experience for them to be in a similar intellectual group.

    - the class will work to broaden their interaction with age peers in the community primary classes through such techniques and devices as:

        - team teaching
        - class exchanges
        - concerts
        - excursions

3. To promote in students a positive self-concept and an "I will try" attitude.

   - gifted children may have a less than positive self-concept.

   - they tend to be aware of expectations of others, yet have little idea of what their own expectations are

   - they require an atmosphere of acceptance in which ideas that are unusual are encouraged and supported.

4. To work toward more pupil involvement in the planning of daily routine and more flexibility in the actual curriculum

   - there are musts and mays involved in their class work

   - the curriculum involves core that all students must participate in, plus options or extended interest areas that they may choose to do.

   - pupils share in round-table discussions to formulate class code/routines.

   - pupils may "bargain" tasks - one for another.

5. To introduce students to a systematic way of approaching all learning

   - students may often be too occupied with the product as opposed to the process or concepts involved in learning; as well, gifted students may tend to have an "I give up" attitude, a sometimes debilitating fear of failure.

   - they are geared to a "one-answer syndrome".

5. To introduce students to a systematic way of approaching all learning continued...

   - they must be taught to identify the problem, consider all sides or facts and realize that products may have several forms or that answer may be varied.

6. To expose students to a wide variety of children's literature.

   - gifted children tend to be extensive readers yet may channel energies in one area of literature.

   - they need direction and guidance in selecting books which meet their intellectual potential, stimulate higher levels of thinking and broaden their horizons.

   - they require participatory reading activities.

   - literature will be used as the basis for language activities.

   - gifted children have excellent decoding skills. They need a broadening of their reading experience to take advantage of such advanced skills.

7. To foster student appreciation of art and music through the study of artists and musicians.

   - students are encouraged to learn about new or different art forms through the study of famous artists and musicians.

   - students will develop an awareness and appreciation of various styles in conjunction with the techniques taught in art and music classes.

8. To introduce students to computer studies.

    - using the computer for computer-assisted instruction.
    - and also as a tool for programming for the student who is advanced in a specific subject.

9. To diagnose strengths and weaknesses in the students as well as the program so that the latter may continue to improve.

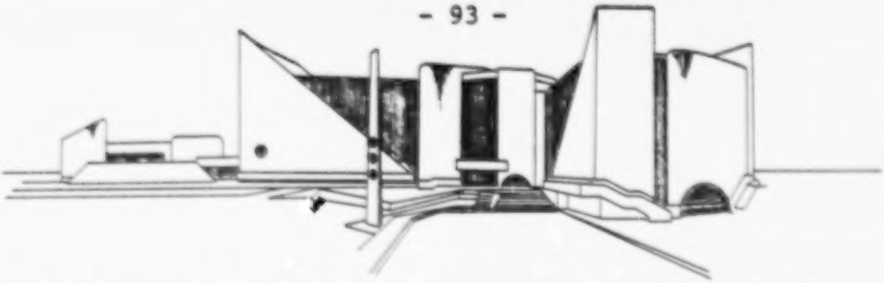
    - this is a special education class and gifted children do not exhibit their giftedness in all areas; they have areas which are stronger than others, areas which require further development.

APPENDIX C

Parental Permission for Student's Involvement in Research Project

J. P. McLOUGHLIN
Director of Education
Secretary and Treasurer

C. A. COWAN
Assistant Director
of Education



THE BOARD OF EDUCATION FOR THE CITY OF SCARBOROUGH

EDUCATION CENTRE, 140 BOROUGH DRIVE, SCARBOROUGH, ONTARIO, M1P 4N6 TEL. 296-7100

June 1, 1983

Dear Parent:

Your child has recently been accepted into the Grade 3 Gifted Program at Churchill Heights Junior Public School for next year. As you may know, the Grade 3 program is a "pilot" one, meaning that its permanency and format are under evaluation.

To help the Scarborough Board of Education make a more informed decision about the future of this program, we are asking for your co-operation and participation in a number of evaluative measures.

These will include two questionnaires for you to complete (one in June, 1983, the other in June, 1984) regarding your child's performance and adjustment at school. In addition, we would like your permission for to participate in short testing and observation sessions in June, 1983, September, 1983, and June, 1984. These involve tests of intellectual functioning, reading comprehension, and mathematics; as well as observations and assessment of social, emotional, and personality development.

If you are agreeable to have your child participate in this evaluation, please sign the attached permission slip and return it in the envelope provided as soon as possible. (The copy is for you to keep for your records.)

All information about your child will be presented anonymously in any reports. The program evaluation reports will be made available to you at the conclusion of the study period. If you have any questions, please call one of us at the numbers below.

Sincerely,

Dave Farquhar Centrally Assigned Principal Student and Community Services 296-7499	Rhona Shulman Research Assistant 296-7521

I, ______________________________, parent or guardian of ________________________,

grant permission for my son/daughter to participate in the testing and observation

sessions the Grade 3 Gifted Program Evaluation.

____
(Signature)

Finance	W. D. MASON, Comptroller	Plant	T. A. LENNARD, Superintendent
Personnel	C. R. MASON, Superintendent	Program	P. SIDORCHUK, Superintendent
Planning and Operations	J. W. WADE, Superintendent	Student and Community Services	F. G. PLUE, Superintendent

APPENDIX D

Teacher Questionnaire

FOR OFFICE USE ONLY

GRADE 3 GIFTED PROGRAM EVALUATION

TEACHER QUESTIONNAIRE

[ ]
1, 2

Circle the number which best describes how much each of the following characteristics have been displayed by the student during the past school year.

[ ]
3

		Very little	Little	Moderate	A lot	A great deal	
PART A: School Adjustment and Cognitive Behaviour							
1. *Knowledge and Skills.* Possesses a comfortable knowledge of basic skills and factual information.		1	2	3	4	5	[4]
2. *Concentration.* Has ability to concentrate; is not easily distracted.		1	2	3	4	5	[5]
3. *Enjoyment of School.* Enjoys academic pursuits and assignments; likes school.		1	2	3	4	5	[6]
4. *Persistence.* Has the ability and desire to follow through on work; concerned with completion; able to see a problem through.	In own interests.	1	2	3	4	5	[7]
	In assigned tasks . .	1	2	3	4	5	[8]
5. *Responsiveness.* Is easily motivated; responsive to adult suggestions and questions.		1	2	3	4	5	[9]
6. *Intellectual Curiosity.* Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own (in connection with personal interests or group group concerns).		1	2	3	4	5	[10]
7. *Challenge.* Enjoys the challenge of difficult problems, assignments, issues, materials.		1	2	3	4	5	[11]

	Very little	Little	Moderate	A lot	A great deal	
8. *Perceptiveness.* Is alert, perceptive, and observant beyond his or her years; aware of many stimuli.	1	2	3	4	5	[12]
9. *Verbal Facility.* Shows marked facility with language; uses many words easily and accurately.	1	2	3	4	5	[13]
10. *Fluency of Ideas.* Produces a large number of ideas or products, often very quickly. .	1	2	3	4	5	[14]
11. *Flexibility.* Is able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems.	1	2	3	4	5	[15]
12. *Sensitivity to Problems.* Perceives and is aware of problems that others may not see; is ready to question or change existing situations and suggest improvements.	1	2	3	4	5	[16]
13. *Originality.* Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality.	1	2	3	4	5	[17]
14. *Imagination.* Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights.	1	2	3	4	5	[18]
15. *Reasoning.* Is logical, often generalizes or applies understanding in new, situations expands concepts into broader relationships, or sees parts in relation to the whole. .	1	2	3	4	5	[19]

	Very little	Little	Moderate	A lot	A great deal	
16. *Independence in Thought.* Inclined to follow his own organization and ideas rather than the structuring of others.	1	2	3	4	5	[20]
17. *Independence in Work.* Able to plan and organize activities, direct action, and evaluate results with a minimum of adult direction and attention. .	1	2	3	4	5	[21]
18. *Elaboration.* Concerned with detail and complexity; often involved with a variety of implications and consequences. . .	1	2	3	4	5	[22]
19. *Aesthetic Appreciation.* Enjoys and is responsive to beauty in the arts or nature.	1	2	3	4	5	[23]

PART B: Social Behaviour

		Very little	Little	Moderate	A lot	A great deal	
20. *Popularity.* Others seem to enjoy and and want to be seen with this child; frequently seen interacting with others in a social, friendly manner.	With adults .	1	2	3	4	5	[24]
	With peers . .	1	2	3	4	5	[25]
21. *Acceptance of Others.* Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth.		1	2	3	4	5	[26]
22. *Status, Leadership.* Assumes dramatic roles or leadership positions; enjoys considerable status in peer group; asserts self with influence in a group situation. .		1	2	3	4	5	[27]

	Very little	Little	Moderate	A lot	A great deal	
23. *Social Maturity.* Able and willing to work with others, can "give and take," is sensitive to the needs and feelings of others, shows consideration, observes rules of social conduct.	1	2	3	4	5	[28]
24. *Sense of Humour.* Ability to laugh at him or herself; gets enjoyment and pleasure from lighter moments in the day; laughs easily and comfortably.	1	2	3	4	5	[29]

PART C: Emotional Behaviour

	Very little	Little	Moderate	A lot	A great deal	
25. *Emotional Stability.* Is able to cope with normal frustrations of living; adjusts to change with minimum of difficulty.	1	2	3	4	5	[30]
26. *Emotional Control.* Expresses and displays emotions appropriately; emotional outbursts rarely occur.	1	2	3	4	5	[31]
27. *Openness to Experience.* Appears to be receptive to new tasks or experiences; seems able to take reasonable risks; can respond naturally to unusual or unexpected stimuli.	1	2	3	4	5	[32]
28. *Enthusiasm.* Appears enthusiastic about school related activities; enters into most activities with eagerness and wholehearted participation.	1	2	3	4	5	[33]
29. *Self-Acceptance.* Seems to understand and accept self; able to view self in terms of both limitations and abilities.	1	2	3	4	5	[34]

		Very little	Little	Moderate	A lot	A great deal	
30. *Conformity.* Behaviour is influenced by expectations and desires of others	Influence of adults .	1	2	3	4	5	[35]
	Influence of peers .	1	2	3	4	5	[36]
31. *Anxiety over Achievement.* Seems anxious about achievement; worried or concerned about school work, or the impression any performance makes on others. . . .		1	2	3	4	5	[37]
32. *Competitiveness.* Has high standards for performance, usually desiring to do as well or better than peers.		1	2	3	4	5	[38]
33. *Aggressiveness.* Acts with apparent intent to hurt others.		1	2	3	4	5	[39]

PART D

34. In what way(s) will this child benefit from his or her placement in the Gifted Program?

35. Additional comments:

APPENDIX E

Parent Questionnaire

FOR OFFICE USE ONLY

GRADE 3 GIFTED PROGRAM EVALUATION

PARENT QUESTIONNAIRE

PART A:

[ ]
1, 2

Circle the number which best describes how much each of the following characteristics is displayed by your child as you see him or her.

Circle 1, if VERY LITTLE of the characteristic is displayed.
Circle 2, if LITTLE of the characteristic is displayed.
Circle 3, if a MODERATE amount of the characteristic is displayed.
Circle 4, if A LOT of the characteristic is displayed.
Circle 5, if A GREAT DEAL of the characteristic is displayed.

[ ]
3

		Very little	Little	Moderate	A lot	A great deal	
1. *Enjoyment of School.* Enjoys academic pursuits and assignments; likes school.		1	2	3	4	5	[4]
2. *Persistence.* Ability and desire to follow through on work; concern with completion; ability to see a problem through.	In own Interests.	1	2	3	4	5	[5]
	In assigned tasks . .	1	2	3	4	5	[6]
3. *Intellectual Curiosity.* Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own (in connection with personal interests or group concerns).		1	2	3	4	5	[7]
4. *Perceptiveness.* Is alert, perceptive, and observant beyond his or her years; aware of many stimuli.		1	2	3	4	5	[8]
5. *Fluency of Ideas.* Produces a large number of ideas or products, often very quickly. . .		1	2	3	4	5	[9]
6. *Flexibility.* Able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems.		1	2	3	4	5	[10]

		Very little	Little	Moderate	A lot	A great deal	
7. *Sensitivity to Problems.* Perceives and is aware of problems and inconsistencies that others may not see; is ready to question or change existing situations and suggest improvements.		1	2	3	4	5	[11]
8. *Originality.* Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality.		1	2	3	4	5	[12]
9. *Imagination.* Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights.		1	2	3	4	5	[13]
10. *Elaboration.* Concerned with detail and complexity; often involved with a variety of implications and consequences.		1	2	3	4	5	[14]
11. *Aesthetic Appreciation.* Enjoys and is responsive to beauty in the arts of nature.		1	2	3	4	5	[15]
12. *Independence in Thought.* Inclined to follow his own organization and ideas rather than the structuring of others.		1	2	3	4	5	[16]
13. *Independence in Work.* Able to plan and organize activities, direct action, and evaluate results with a minimum of adult direction and attention.		1	2	3	4	5	[17]
14. *Popularity.* Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social, friendly manner. .	With adults.	1	2	3	4	5	[18]
	With peers .	1	2	3	4	5	[19]

		Very little	Little	Moderate	A lot	A great deal	
15. *Acceptance of Others.* Relates to others with genuine interest and concern; enjoys others, seeks them out, shows warmth.		1	2	3	4	5	[20]
16. *Social Maturity.* Able and willing to work with others, can "give and take," is sensitive to the needs and feelings of others, shows consideration, observes rules of social conduct.		1	2	3	4	5	[21]
17. *Sense of Humour.* Ability to laugh at him or her self; gets enjoyment and pleasure from lighter moments in the day; laughs easily and comfortably.		1	2	3	4	5	[22]
18. *Emotional Stability.* Is able to cope with normal frustrations of living; adjusts to change with minimum of difficulty.		1	2	3	4	5	[23]
19. *Emotional Control.* Expresses and displays emotions appropriately; emotional outbursts rarely occur.		1	2	3	4	5	[24]
20. *Enthusiasm.* Appears enthusiastic about school related activities; enters into most activities with eagerness and whole-hearted participation.		1	2	3	4	5	[25]
21. *Self-Acceptance.* Seems to understand and accept self; able to view self in terms of both limitations and abilities.		1	2	3	4	5	[26]
22. *Conformity.* Behaviour is influenced by expectations and desires of others	Influence of adults	1	2	3	4	5	[27]
	Influence of peers	1	2	3	4	5	[28]

	Very little	Little	Moderate	A lot	A great deal	
23. *Anxiety over Achievement.* Seems anxious about achievement; worried or concerned about school work, or the impression any performance makes on others. . . .	1	2	3	4	5	[29]
24. *Competitiveness.* Has high standards for performance, usually desiring to do as well or better than peers.	1	2	3	4	5	[30]
25. *Aggressiveness.* Frequently acts with apparent intent to hurt others.	1	2	3	4	5	[31]

PART B:

In this part of the questionnaire, we would like to know about your satisfaction and dissatisfaciton with various aspects of your child's school program last year.

Circle -2, if you were VERY DISSATISFIED.
Circle -1, if you were DISSATISFIED.
Circle 0, if you are UNSURE.
Circle +1, if you were SATISFIED
Circle +2, if you were VERY SATISFIED.

1. (a) How satisfied were you with lunch-time arrangements for your child? . . .	-2	-1	0	+1	+2	[32]

(b) Where did your child spend his or her lunch-time? (Please check / one.)

At school ________ (1)

At home ________ (2) [33]

Other ________ (3)

(c) If you answered "dissatisfied" in 1 (a), please explain why.

____

____

____

____

2. (a) How satisfied were you with the way in which your child had gone to and come home from school last year? . . . . -2 -1 0 +1 +2 [34]

(b) How did your child usually arrive at and depart from school? (Please check / one.) [35]

Walks __________ (1)

School Bus __________ (2)

Private Transportation __________ (3)

Public Transportation __________ (4)

Other __________ (5)

(c) If you answered "dissatisfied" in 2 (a), please explain why.

____

____

____

____

3. How satisfied were you with the sports facilities for your child last year? . . .	-2	-1	0	+1	+2	[36]
4. How satisfied were you with the extra-curricular programs (e.g., music, drama, school clubs) available for your child last year?	-2	-1	0	+1	+2	[37]
5. How satisfied were you with the amount of work your child had done at school last year?	-2	-1	0	+1	+2	[38]
6. How satisfied were you with the degree of difficulty or challenge offered by the work your child had done at school last year?	-2	-1	0	+1	+2	[39]
7. How satisfied were you with the appropriateness of the program offered to your child last year?.	-2	-1	0	+1	+2	[40]

8. Additional comments:

____

____

____

____

____

APPENDIX F

Student Interviews

Student's Name: ____________________

Interviewer: ______________________

PILOT GRADE 3 GIFTED PROGRAM: RESEARCH PROJECT

STUDENT QUESTIONNAIRE

I am going to be asking you a few questions. The questions will be about school activities, your friends, and your behaviour at school, the kind of work you do, and the kind of student and person you are. There are no right or wrong answers. I would like you to answer the questions as truthfully as you can. Your name will not be recorded on this answer sheet (show questionnaire to child) to encourage you to give your most honest responses. I will be recording your answers for you in a type of shorthand, so you do not need to worry about writing anything.

Here are a couple of sample questions:

(0 = Not Sure, No Answer, Neutral)

1. How do you like swimming? _____________

____

-2	-1	0	+1	+2
Not at all				A great deal

2. How do you like peanut butter? _______

____

-2	-1	0	+1	+2
Not at all				A great deal

1. Where do you have your lunch?
   Has it been a really good or a really bad experience for you? Or has it been a mixture of both? ____________________________

   ____

-2	-1	0	+1	+2
Very unenjoyable				Very enjoyable

2. (a) How do you get to and from school?

____

(b) How do you like the way you get to and from school? ____________________

____

-2	-1	0	+1	+2
Very unhappy				Very happy

3. How have you enjoyed the sports activities available to you this year at school? _____

____

-2	-1	0	+1	+2
Very unenjoyable				Very enjoyable

4. How have you enjoyed the other activities available to you this year at school? (For example music, drama, school clubs). _____

____

-2	-1	0	+1	+2
Very unenjoyable				Very enjoyable

5. Think about the friends you have at this school.

(a) Do you have very many friends this year?

____

____

1	2	3	4	5
None				A lot

(b) Do you have any close friends or just a few?

____

____

1	2	3	4	5
None				A lot

6. Some friendships are more important than others. There are some people with whom you really seem to be able to share ideas and experiences. How often do you find classmates who like to do the things you like to do or like to think about the things you like to think about at school?

____

____

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very Often

7. (a) Think about your behaviour toward your classmates. How friendly are you toward your classmates? ______________

____

-2	-1	0	+1	+2
Very unfriendly				Very friendly

(b) How friendly or unfriendly are these classmates toward you? ______________

____

-2	-1	0	+1	+2
Very unfriendly				Very friendly

8. How did you like the amount of school work you were given to do this year? Was it too little, too much, or just right? _________

____

-2	-1	0	+1	+2
Too little		Just right		Too much

9. How difficult was the school work you had to do this year? ____________________

____

-2	-1	0	+1	+2
Very Easy				Very difficult

10. In general, how interesting did you find the work at school this year? ______________

____

-2	-1	0	+1	+2
Very uninteresting				Very interesting

11. In a very general way, how much have you enjoyed school this year? ______________

____

-2	-1	0	+1	+2
Not at all	Very little		A lot	A great deal

12. Try to think about your curiousity and your eagerness to learn. Have you had many times this year in school when you have been able to go and learn about the things that interest you? ______________

____

2-	-1	0	+1	+2
No, none				Yes, a lot

13. Has it been easy or difficult for you to find out new information this year? That is, are there people or books available which have helped you to learn about new things, and to answer some of your questions?

____

____

-2	-1	0	+1	+2
Very difficult				Very easy

14. How easy has it been for you to get your school work done and complete assignments this year? ____________________________

____

-2	-1	0	+1	+2
Very difficult				Very easy

15. How easy is it for you to solve your own problems and work without the help of others at school? _______________________

____

-2	-1	0	+1	+2
Very difficult				Very easy

16. Do you think you are a person who has a lot of new and interesting ideas? Do you think you sometimes have ways of seeing or doing things that are different from your classmates?

____

____

-2	-1	0	+1	+2
Not at all				Yes a lot

17. When you have a task, a chore, or a job to do, how good are you about getting it done on your own without having to be reminded or nagged to do it? ________________________________

____

-2	-1	0	+1	+2
Very bad				Very good

18. What kinds of things did you really like about school this year? ____

____

19. What kinds of things did you particularly dislike abut school this year? ___________________________________

____

APPENDIX G

Student Observation Chart

PILOT GRADE THREE GIFTED PROGRAM: OBSERVATION DATA

STUDENT: ______________________________

OBSERVER: ______________________________

DAY OF OBSERVATION: ______________________

TIME(S) OF OBSERVATION: (two half hour observations, 5 minutes ON, 5 minutes OFF) ______________________

GENERAL DESCRIPTION OF CLASS ACTIVITY(IES) PLANNED (LESSON, ASSIGNMENT, ARTWORK, READING, ETC.):

1)
2)
3)
4)
5)
6)

GENERAL DESCRIPTION OF ACTIVITY(IES) FOR STUDENT BEING OBSERVED:

1)
2)
3)
4)
5)
6)

BEHAVIOUR OBSERVATION

WASTING TIME	Number of Minutes/Seconds	Total
1) Active, Involves only Self *(playing, preparing for work)*		
2) Due to Other's Intervention *(playing, talking)*		
3) Out of Class *(drink, bathroom)*		

BOTHERING BEHAVIOUR	Number of Minutes/Seconds	Total
1) Bothers Teacher(s) *(makes excessive demands on time)*		
2) Bothers Classmate(s) *(talking, making distracting noises)*		

EXTREME BEHAVIOURAL EXPRESSION	Number of Minutes/Seconds	Total
1) Withdrawn, Passive *(daydreaming, off to one side)*		
2) Fighting, Aggressive		

OTHERS	Number of Minutes/Seconds	Total
1) Doing Other Than Assigned Work		
2) Excessive, Unsolicited Helping of Teacher		
3) Helping Other Students: Initiated by self		
Initiated by others		

APPENDIX H

Grade 4 Teacher Questionnaire

PILOT GRADE 3 GIFTED PROGRAM RESEARCH PROJECT:
GRADE 4 TEACHER QUESTIONNAIRE

1. (a) Were there any academic differences between the students named on the accompanying letter and the others in your class at the beginning of this school year?

Yes . . . ☐ No . . . ☐

(b) If yes, please describe. ______________________

2. (a) Were there any social differences (i.e., relationships with peers) between these students and the others in your class at the beginning of this school year?

Yes . . . ☐ No . . . ☐

(b) If yes, please describe. ______________________

3. (a) Were there any behavioural differences between these students and the others in your class at the beginning of this school year?

Yes . . . ☐ No . . . ☐

(b) If yes, please describe. ______________________

4. (a) Were there any differences in the work habits between these students and the others in your class at the beginning this school year?

Yes . . . ☐ No . . . ☐

(b) If yes, please describe. ________________________________

____

____

____

____

5. (a) Overall, do you feel that there are benefits to enrolling a gifted student at the Grade 3 level?

Yes . . . ☐ No . . . ☐

(b) Please elaborate. ________________________________

____

____

____

____

____

____

6. Additional comments: ________________________________

____

____

____

____

RS/dd

APPENDIX I

Questionnaire Survey of Elementary Gifted Programs in Ontario

Scarborough Board of Education Survey of Elementary Gifted Programs

Name of Board: ______________________________

1. Has your Board offered any type of program for students identified as Gifted this year at:

	YES	NO
a) the primary level (Grades 1 to 3)?	☐	☐
b) the junior level (Grades 4 to 6)?	☐	☐

2. a) If YES to either part of question 1, what type of program was offered?

	Primary	Junior
Enrichment	☐	☐
Withdrawal	☐	☐
Self-contained class	☐	☐
Other: (please describe)	☐	☐

____

b) Have any formal evaluations of these programs been carried out?

YES ☐ NO ☐

c) If YES to question 2 b), would you kindly enclose a list of titles and where a copy of any reports may be obtained. (The reverse side of this page may be used).

3. Does your Board have any plans for new or expanded programs for Gifted students in the coming school year (1984-85)?

	YES	NO
a) the primary level	☐	☐
b) the junior level	☐	☐

APPENDIX J

Teacher Guidelines for Testing Procedures
(Similar instructions were issued for both the
September, 1983, and May, 1984, administrations.)

THE BOARD OF EDUCATION FOR THE BOROUGH OF SCARBOROUGH

INTER-OFFICE MEMORANDUM

To: Ann Dugal
Date: Sept. 16, 1983

From: Rhona Shulman
Copy to:

Subject: STEP Reading Test Procedures for Administration

1. Arrange the students' desks to minimize cheating.
2. Ensure that each student has a pencil and eraser.
3. Distribute the *Reading Test Sample* to each student.
4. Explain in your own words the purpose of the test. (Ann, I didn't write this out for you, because I felt it would be stilted if you had to read it.) You should mention that it is a reading test to determine what level they are reading at, but that no grades are given, and no "passing" or "failing" is possible.
5. Work through the *Reading Test Sample* with them.
6. Distribute copies of the test to each student.
7. Ask students to write their names on the front page.
8. Without beginning the test, ask the students to open the booklet and look at page 2.

Read the following:

> On this page is a paragraph followed by six questions which you are to answer.
>
> On pages 3 and 4 you will find four more passages. Again, you are to answer all the questions which follow each passage.
>
> Now, turn to page 5. Here are more of the questions you did in the sample. For each question, you must choose the answer that most closely means the same as the underlined word.
>
> Now, turn to page 6. On this page is a T.V. guide listing followed by questions. On page 7 is a poem and on the last page is a play both of which are followed by questions for you to answer.

BOARD OF EDUCATION FOR THE CITY OF SCARBOROUGH

GRADE 3 READING TEST SAMPLE

In the test you will be taking today, you will be given passages to read--sentences, paragraphs, stories, or poems--and then there will be a few questions about each one. Below you will find some examples of the kinds of questions you will find in the test.

Read the following passage carefully and then answer the two questions below by circling the correct answer.

The Herring Gull is especially good at seizing food from other birds. It is about twenty-four inches long, and it is the gull that you most often see at the beach. It will often chase a bird that is carrying a fish or a stolen egg home to eat. The Herring Gull keeps attacking the other bird until it drops the egg or the fish. Of course the egg will break if it hits the ground. But Herring Gulls are so fast and agile they can sometimes catch an egg in mid-air.

1. **Which of the following is the best title for this passage?**

   A) How Herring Gulls Get Food
   B) Catching Eggs
   C) How Herring Gulls Fly Faster Than Other Birds
   D) Eating Habits of Birds

2. **How long is a Herring Gull?**

   A) 12 inches B) 18 inches
   C) 24 inches D) 32 inches

Each of the sentences below has one word with a line under it. You may not know what the word means, but the rest of the sentence should help you figure out what the underlined word means. Under each sentence there are four words. Circle the answer that means most nearly the same as the underlined word.

3. **Listen to me when I speak to you.**

   A) walk B) talk
   C) cry D) jump

4. **Mrs. Smith saved fragments of her broken vase so that she could glue them together again.**

   A) molds B) designs
   C) contents D) pieces

Now wait until your teacher tells you to open the booklet before you begin the test.

You have 40 minutes to work on the test. When you are finished, close the booklet, leave it on the top of your desk, and go on to do some other quiet seat work until the 40 minutes are up.

Now turn to the beginning of the booklet and BEGIN.

9. Time the students for 40 minutes. Try to maintain a quiet test atmosphere until either all the students are finished, or 40 minutes are over.
10. Collect the test booklets.
11. Forward the booklets to me:

Rhona Shulman
Research Centre, 2nd level

Thank you very much for your co-operation. Good Luck.

Rhona Shulman
Research Centre

RS:pbi

THE BOARD OF EDUCATION FOR THE BOROUGH OF SCARBOROUGH

INTER-OFFICE MEMORANDUM

To: Ann Dugal
Date: Sept. 26, 1983

From: Rhona Shulman
Copy to: Bruce Whitehouse

Subject: Procedures for Administration of the Mathematics Computation Test (Test 8 in the Canadian Achievement Tests Booklet)

1. Arrange the students' desks to minimize cheating.
2. Ensure that each student has a pencil and eraser.
3. Distribute a test booklet to each student.
4. Ask students to write their names on the front page.
5. Explain the purpose of the test by saying:

> We are going to be doing two more tests--both of them related to mathematics (or arithmetic--Ann, you choose the more appropriate word). The test you will do today, will show how well you add, subtract, multiply and divide.

6\.

> Now open your booklet to page 17 and find Sample Item A at the top of the page. Look at the problem. You may use the space around the question as "work space" to help you solve the problem. Now look at the numbers next to the problem. Find the answer and fill in the circle that goes with the answer you have chosen. Then STOP.

DO NOT READ THE ITEM ALOUD.
After a pause to let the students answer the problem, continue with:

> You should have filled in the circle that goes with the number "10", because seven plus three is ten.

7. Now you are going to do some more items. There may be some problems that you cannot do. If you are not sure of an answer, choose the one you think is right or skip that problem and go on to the next one. If the correct answer is not given, fill in the circle that goes with *"None of the above"*. When you see the words "GO ON" at the bottom of a page, go right on to the next page. When you come to the word "STOP" on page 22, you have finished the test. DO NOT CONTINUE ON TO THE NEXT SECTION. You have 30 minutes to work on the test. If you finish early you may check your answers. When you are finished, close the booklet, leave it on the top of your desk, and go on to do some other quiet seat work until the 30 minutes are over. Are there any questions?

When any questions have been clarified, proceed with:

8. Now find problem number one, on page 17, and BEGIN.

9. Time the students for 30 minutes. Try to maintain a quiet test atmosphere until either all the students are finished, or 30 minutes have elapsed.

10. Collect the test booklets, these will be re-used for the Mathematics Concepts and Applications Test .

RS:pbi

THE BOARD OF EDUCATION FOR THE BOROUGH OF SCARBOROUGH

INTER-OFFICE MEMORANDUM

To: Ann Dugal

Date: Sept. 26, 1983

From: Rhona Shulman

Copy to Bruce Whitehouse

Subject: Procedures for Administration of the Mathematics Concepts and Applications Test (Test 9 in the Canadian Achievment Tests Booklet)

1. Arrange the students' desks to minimize cheating.
2. Ensure that each student has a pencil and eraser.
3. Distribute a test booklet to each student.
4. Ask students to write their names on the front page.
5. Explain the purpose of the test by saying:

> The test you will be doing today will show how well you are able to to do mathematics (arithmetic) problems.

6\.

> Now open your booklet to page 23 and find Sample Item A at the top of the page. Read the problem. Now look at the numbers below the problem. Find the answer and fill in the circle that goes with the answer you have chosen. Then STOP.

DO NOT READ THE ITEM ALOUD.
After a pause to let the students answer the problem, continue with:

> You should have filled in the space that goes with the number "3", because Jack and Susan have three oranges altogether.

7. Now you are going to do some more items. There may be some problems that you cannot do. If you are not sure of an answer, choose the one you think is right or skip that problem and go on to the next one. If the correct answer is not given, fill in the circle that goes with *"None of the above"*. When you see the words "GO ON" at the bottom of a page, go right on to the next page. When you come to the word "STOP" on page 31, you have finished the test. You have 35 minutes to work on the test. If you finish early you may check your answers. When you are finished, close the booklet, leave it on the top of your desk, and go on to do some other quiet seat work until the 35 minutes are over. Are there any questions?

When any questions have been clarified, proceed with:

8. Now find problem number one, on page 23, and BEGIN.

9. Time the students for 35 minutes. Try to maintain a quiet test atmosphere until either all the students are finished, or 35 minutes have elapsed.

10. Collect the test booklets.

11. Forward the booklets to me:

Rhona Shulman
Research Centre, 2nd Level

Ann, thanks again, for your co-operation and the support I feel you are transmitting for this evaluation.

Rhona Shulman
Research Assistant

RS:pbi

APPENDIX K

Profiles of Individual Student Academic Performance on Standardized Tests of Reading and Mathematics

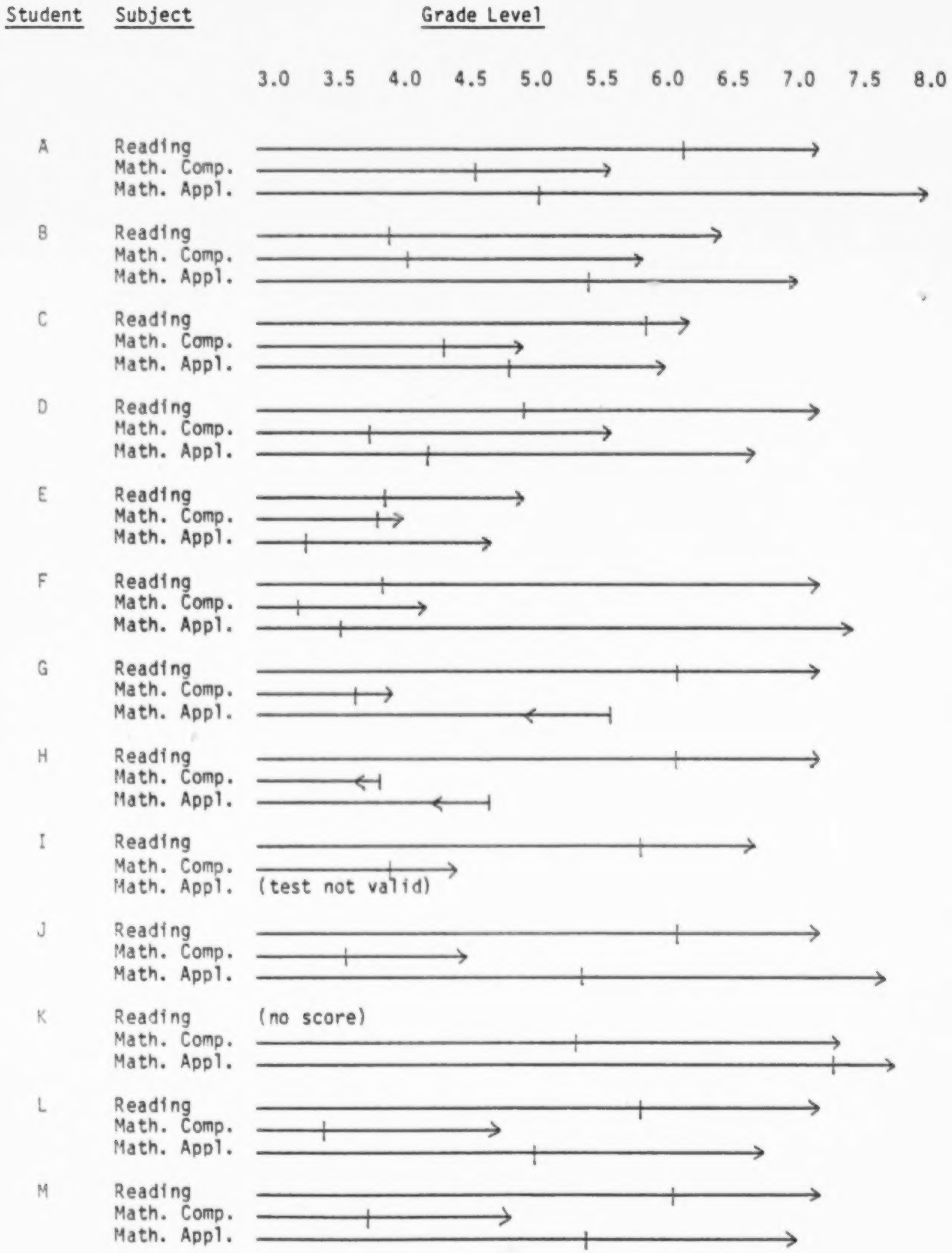


Figure A1. Profiles of individual student academic performance on standardized tests for reading, mathematics computation (Math. Comp.) and mathematics application (Math. Appl.). ("|" represents end of Grade 2 score; ">" or "<" represents end of, and direction of, Grade 3 score.)

APPENDIX L

Teachers' Comments on Open-ended Questions (Grades 2 and 3)

GRADE 2 TEACHERS' COMMENTS ON OPEN-ENDED QUESTIONS

34. In what way(s) will this child benefit from his or her placement in the Gifted program next year?

- needs more stimulation/new challenges (9)
- intellectual needs will receive more attention (3)
- social needs will receive more attention (2)
- develop potential talents in small group setting (2)
- higher standards to measure self against (1)
- more adult stimulation (1)
- draw out leadership (1)

35. Additional Comments

- an asset to the program
- expect great accomplishments as an adult
- student experiences difficulties when having to work under pressure
- X is an extremely sensitive child and it has been difficult to accept idea of leaving old friends and going to a new school
- X's behaviour is currently at the point where it could improve or decline
- X will hopefully make friends and be part of the group--X is not able to do this in regular class
- has interests beyond classmates
- student becomes easily bored when not challenged

GRADE 3 TEACHER'S COMMENTS ON OPEN-ENDED QUESTIONS

34. In what ways was this placement appropriate?

- more acceptance of others' "giftedness", not alone in their giftedness (3)*
  a highly curious and creative child (2)
- growth, potential shown (2)
- growth in higher levels of thinking (2)
- less bossy interactions in others (1)
- growth in academic areas (1)
- growth in social areas (1)
- positive changes in behaviour (1)
- has allowed the child to explore, grow, and create (1)
- showing increasing curiosity (1)
- more confident-growing, exploring, responding (1)
- improved self-image (1)
- academic problems being dealt with and positive change is evident (1)
- responds positively to a variety of challenges (1)

35. Additional Comments

- needs more time in the program; to adjust to a differentiated program; to grow in our atmosphere; needs more growing time (3)
- tremendous potential, not enough opportunities yet to soar, potential showing (2)
- potential evident, but tendency to be lazy (1)
- shows signs of potential, but takes time to warm up (1)
- study habits must improve (1)
- quite advanced in mathematics (1)

---

*Numbers in brackets represent number of responses.

APPENDIX M

Parents' Comments Related to Their Satisfaction with Student Programs

PARENTS COMMENTS (GRADE 2): OPEN-ENDED RESPONSES FROM QUESTION 8

- I found the French Immersion program excellent and the quality of Education was much higher than found near the child's home.
- program not sufficiently challenging in some subjects.
- hope that going to this school will not cause too many lost days or aggravation in transportation to and from day care.
- in most cases, dissatisfaction on our part stems from the fact that the youngster is clearly capable of much more, yet we understand why this is difficult to provide in a standard school setting.
- the withdrawal Enrichment program offered at the home school seemed inadequate for our child.
- our child was noticeably less enthusiastic about the "team teaching" approach to enrichment which was used in Grade 2, than about the "partial pullout" system used in Grade 1.
- through this questionnaire, one might get the wrong impression that we parents were dissatisfied with the school last year. On the contrary, we are convinced and most thankful that the school has done everything it could have done for our child under the circumstances.

PARENTS COMMENTS (GRADE 3): OPEN-ENDED RESPONSES FROM QUESTION 8

- We've been very gratified to watch the growth in our child's horizons - both intellectually and socially - and feel we've all benefitted from the experience.

- The gifted program has rekindled interest in school for our child. X is challenged and much more positive in outlook. It seems to be the placement needed.

- We are extremely pleased with the program and feel it represents the first time our child's educational needs have been met on a full-time basis. We would like to record officially our thanks to Ms. Dugal, whose talent and sensitivity have made this possible.

- Re: bussing. The bus was rowdy and undisciplined; this was very tiring initially, now just unpleasant. The language and jokes are very rude. A lot of time at home was spent explaining obscene jokes and abnormal sexual terms to a rather young but curious mind. No doubt had the driver been firmer this would not have happened!

- Re: sports facilities. We are assuming this refers to physical education.

- Re: ex-curricular activities. There were no apparent extra-curricular activities available. These would be difficult to participate in for the bussed children if they are after or before school.

- Lack of extra-curricular programs (except choir).

- I think this program is ideal and the teacher marvelous. I can only hope it will be carried on.

- Re: bussing. Driver always early and tends to rush children too much.

- Re: bussing. He comes home around 4:20-4:25 P.M. after almost a one hour ride. In the morning, it is only 10-15 minutes which is acceptable.

APPENDIX N

Students' Likes and Dislikes of Their School Programs

STUDENT INTERVIEW (OPEN-ENDED QUESTIONS)

Things Liked in Grade 2

Teachers(s) (6)*, physical education (3), recess (3), spelling (3), friends (2), mathematics (2), activities/work (2), class birthdays (2), trips (2), and (1) for each of the following: principal, the work, plays, nothing, library, other people, computer, drawing in extra time, plasticine, creative writing, art, news, and printing.

Things Disliked in Grade 2

Nothing (6), and (1) for each of the following: day care lunches, lunch routine, lack of friends, split class, poor organization, last minute changes, time out at lunch too short, male peers (bullies), learning things I know already, novel we're reading, lights on, don't get to do activities, female peers.

Things Liked in Grade 3

Teacher (6), classmates (6), interesting and a variety of things to do in class (4), trips (3), physical education (3), work is challenging (2), and (1) for each of the following: the work is just right, more freedom, swimming teacher, mathematics.

Things Disliked in Grade 3

Some classmates (3), the bus (2), independent studies (2), and (1) for each of the following: not enough sports, not enough girls, holidays.

---

*Numbers in brackets represent number of responses.

APPENDIX O

Grade 4 Teachers' Comments on Open-ended Questions

GRADE 4 TEACHER QUESTIONNAIRE: OPEN-ENDED RESPONSES

1. Academic Differences

- Two of the three were more independent workers, having gained this skill through being part of the program last year.
- All were verbally above average.

2. Social Differences

- Those students who were there last year were more "comfortable" initially with the social environment. However, in regards to social maturity, this varied greatly with individual students.
- Three of the students are very sensitive to others (needs, problems, abilities) and would comment upon them to others in a more mature manner.
- The children in the pilot program felt more at ease in the classroom situation and more confident with the other students.

3. Behavioural Differences

- This varied greatly with the students. However, the students who do present the most marked emotional and behavioural problems are external admissions.
- They were confident in being able to adjust quickly to a new teacher and program. Of course, they had friends in other classes to relate to and were more comfortable in the yard (recess).
- These students were more vocal and participated more due perhaps to the familiarity of the situation.

4. Work Habits

- The students who were in the pilot program last year were more independent workers initially. This was particularly true of two out of the three.
- These students organized their time well and worked capably at the activity centers. They were also quick to understand and follow directions.

5. Overall Benefits

- For some students this program at the Grade 3 level is most beneficial--particularly those who are functioning well beyond the primary level academically but socially (they) may or may not be.

- They were more responsive in one to one situations with me (having had more opportunity to benefit from this type of learning with previous teachers).

- I feel the activity centre based program promotes independence, organizational skills, self direction and responsibility. As well, the children go on many educational field trips and have easy access to computers. The fact the student can receive this type of program a year earlier makes it, in my eyes, a benefit to enrol at the Grade 3 level.

6. Additional Comments

- I find the overall benefits of the pilot program difficult to assess as several of the students in my class who were external admissions seemed to be advanced. However, the extra input which they do receive in the gifted program is definitely advantageous. I have heard innumerable times from my students how "bored" they actually were in their former schools. Generally, I would say that there is a need for this program and I for one hope that it is continued.

- I believe benefits from the Grade 3 program are noticeable most particularly in social (less of an adjustment) and academic areas.

APPENDIX P

Description of Various Programs Offered to Gifted Students

AN EXPLANATION OF THE TYPES OF DIFFERENTIATED PROGRAMMING OFFERED TO GIFTED STUDENTS

Although there is no set policy by the Ministry and sometimes differences exist even within a Board, the following descriptions are intended to provide broad guidelines.

"Enrichment" refers to within regular class (sometimes school) programming. Services may be provided by classroom teacher, resource teacher, area enrichment teacher etc.

"Withdrawal" programs refer to a multi-arrangement of special situations in which students participate for varying lengths of time in programs of academic, artistic, or other disciplinary interests. The variety of options here are too great to mention, as are the personnel who are involved (ranging from resource teachers, area enrichment teachers, other professionals, etc.)

"Self-contained" classes generally are taught by a full-time teacher with special training in gifted education and a reduced enrolment of students who have been identified as gifted.

"Other", examples of programs cited included library teacher facilitator, Saturday morning enrichment and peer association.